

Department of Zoology									
1.1.1 Curricula developed and implemented have relevance to the local/ national / regional and global developmental needs which are reflected in Programme Outcomes (POs) and Course Outcomes (COs) of various programmes offered by the Institution									
S. No.	Course Code	Name of the Course	L	N	R	G	POs, PSOs, COs Addressed		
							POs	PSOs	COs
2023-2024									
1	ZU231CC1	Core Course I: Invertebrata	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	PO 1 - To obtain comprehensive knowledge and skills to pursue higher studies in the relevant field of science. PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence. PO 3 - To reflect upon green initiatives and take responsible steps to build a sustainable environment. PO 7 - To participate in learning activities throughout life, through self-paced and self-directed learning to develop knowledge and skills.	PSO 1 - To develop deep understanding of the key concepts of Zoology in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Aquaculture Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution. PSO 2 - To perform laboratories experiments with suitable techniques at cellular, molecular, biochemical, physiological and systematic levels.	CO 1 - To understand the basic concepts of invertebrate animals and recall its structure and functions. CO 2 - To illustrate and examine the systemic and functional morphology of various groups of invertebrata. CO 3 - To differentiate and classify the animal's mode of life in various taxa and estimate the biodiversity. CO 4 - To compare and distinguish the various physiological processes and organ systems in lower animals. CO 5 - To infer and integrate the parasitic and economic importance of invertebrate animals.
2	ZU231CP1	Core Lab Course: Invertebrata	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	PO 1 - To obtain comprehensive knowledge and skills to pursue higher studies in the relevant field of science. PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence. PO 3 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.	PSO 1 - To develop deep understanding of the key concepts of Zoology in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Aquaculture Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution. PSO 2 - To perform laboratories experiments with suitable techniques at cellular, molecular, biochemical, physiological and systematic levels. PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.	CO 1 - To identify and label the external features of different groups of invertebrate animals. CO 2 - To illustrate and examine the circulatory system, nervous system, and reproductive system of invertebrate animals. CO 3 - To differentiate and compare the structure, function, and mode of life of various groups of animals. CO 4 - To compare and distinguish the dissected internal organs of lower animals. CO 5 - To prepare and develop the mounting procedure of economically important invertebrates.
3	ZU231EC1	Elective Course I: Allied Zoology I	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	PO 1 - To obtain comprehensive knowledge and skills to pursue higher studies in the relevant field of science. PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence. PO 3 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.	PSO 1 - To develop deep understanding of the key concepts of Zoology in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Aquaculture Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution. PSO 2 - To perform laboratories experiments with suitable techniques at cellular, molecular, biochemical, physiological and systematic levels.	CO 1 - To understand the basic concepts of invertebrate animals and recall its structure and functions. CO 2 - To illustrate and examine the systemic and functional morphology of various groups of invertebrata. CO 3 - To differentiate and classify the animal's mode of life in various taxa and estimate the biodiversity. CO 4 - To compare and distinguish the various physiological processes and organ systems in lower animals. CO 5 - To infer and integrate the parasitic and economic importance of invertebrate animals.
4	ZU231EP1	Elective Lab Course I: lab on Allied Zoology I	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	PO 1 - To obtain comprehensive knowledge and skills to pursue higher studies in the relevant field of science. PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence. PO 3 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.	PSO 1 - To develop deep understanding of the key concepts of Zoology in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Aquaculture Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution. PSO 2 - To perform laboratories experiments with suitable techniques at cellular, molecular, biochemical, physiological and systematic levels. PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.	CO 1 - To compare and distinguish the dissected internal organs of animals. CO 2 - To prepare and develop the mounting procedure of important invertebrate and chordate anatomical parts. CO 3 - To identify and label the external features of different groups of invertebrates. CO 4 - To analyze the ecological roles and significance of the organisms within their ecosystems. CO 5 - To evaluate evolutionary relationships and broader biological concepts among the spotted organisms.
5	ZU231FC1	Foundation Course in Zoology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	PO 1 - To obtain comprehensive knowledge and skills to pursue higher studies in the relevant field of science. PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence. PO 3 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.	PSO 1 - To develop deep understanding of the key concepts of Zoology in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Aquaculture Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution. PSO 2 - To perform laboratories experiments with suitable techniques at cellular, molecular, biochemical, physiological and systematic levels. PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.	CO 1 - To identify different groups of invertebrate animals by observing their external characteristics. CO 2 - To understand the organs, organ system and their functions in lower animals. CO 3 - To get knowledge about the different es of life and their adaptation based on the environment. CO 4 - To dissect and display the internal organs and mount the mouthparts and scales of invertebrates.

6	ZU231NMI	Skill Enhancement Course Sec-1 (NME) Ornamental Fish Farming & Management	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	PO 1 - To obtain comprehensive knowledge and skills to pursue higher studies in the relevant field of science. PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence. PO 3 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.	PSO 1 - To develop deep understanding of the key concepts of Zoology in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Aquaculture Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution. PSO 2 - To perform laboratories experiments with suitable techniques at cellular, molecular, biochemical, physiological and systematic levels. PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.	CO 1 - To identify commercially important ornamental fishes, including indigenous and exotic varieties. CO 2 - To explore food and feeding habits in ornamental fishes, including formulated feed and live feed. CO 3 - To gain expertise in the maintenance of aquariums and water quality management.
7	ZU232CC1	Core Course II: Chordata	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	PO 1 - To obtain comprehensive knowledge and skills to pursue higher studies in the relevant field of science. PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence. PO 3 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.	PSO 1 - To develop deep understanding of the key concepts of Zoology in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Aquaculture Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution. PSO 2 - To perform laboratories experiments with suitable techniques at cellular, molecular, biochemical, physiological and systematic levels. PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.	CO 1 - To recall the name and distinct features of different sub phylum belonging to phylum Chordata. CO 2 - To explain the structural organization, function and evolutionary aspects of chordates. CO 3 - To interpret the biological significance and the conservation of chordates.
8	ZU232CP1	Core Lab Course II: Lab on Chordata	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	PO 1 - To obtain comprehensive knowledge and skills to pursue higher studies in the relevant field of science. PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence. PO 3 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.	PSO 1 - To develop deep understanding of the key concepts of Zoology in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Aquaculture Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution. PSO 2 - To perform laboratories experiments with suitable techniques at cellular, molecular, biochemical, physiological and systematic levels. PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.	CO 1 - To identify and recall the name and distinct external and internal features of animals belonging to phylum Chordata. CO 2 - To explain the structural organization of various organs and systems in different classes of vertebrates. CO 3 - To analyze, compare, and distinguish the morphological features and developmental stages of chordates.
9	ZU232EC1	Elective Course II: Allied Zoology II	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	PO 1 - To obtain comprehensive knowledge and skills to pursue higher studies in the relevant field of science. PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence. PO 3 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.	PSO 1 - To develop deep understanding of the key concepts of Zoology in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Aquaculture Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution. PSO 2 - To perform laboratories experiments with suitable techniques at cellular, molecular, biochemical, physiological and systematic levels. PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.	CO 1 - To recognize the major functions of organ and immune systems in the human body and their role and analyze the stages of development in frog. CO 2 - To correlate the physiological processes of animals and relationship of organs system, inheritance of characters. CO 3 - To recall the internal parts and developmental stages, patterns of inheritance and different types of animal behavior.
10	ZU232NMI	Non-Major Elective NME II: Bio-composting for Entrepreneurship	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	PO 1 - To obtain comprehensive knowledge and skills to pursue higher studies in the relevant field of science. PO 3 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.	PSO 1 - To develop deep understanding of the key concepts of Zoology in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Aquaculture Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution. PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.	CO 1 - To define the process of bio composting by earthworms and explain the economic cost of establishing small Biocompost units as a cottage industry. CO 2 - To establish a small Biocompost units as a cottage industry. CO 3 - To demonstrate composting techniques for various applications like solid waste management, industrial waste recycling using sugarcane bagasse, etc

11	ZU232SE1	Skill Enhancement Course SEC I Animal Behaviour	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To obtain comprehensive knowledge and skills to pursue higher studies in the relevant field of science.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 6 - To observe ethical, moral and social values in personal and social life leading to highly cultured and civilized personality.</p> <p>PO 7 - To participate in learning activities throughout life, through self-paced and self-directed learning to develop knowledge and skills.</p>	<p>PSO 1 - To develop deep understanding of the key concepts of Zoology in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Aquaculture Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 2 - To perform laboratories experiments with suitable techniques at cellular, molecular, biochemical, physiological and systematic levels.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To gain a comprehensive understanding of the key concepts related to the genetics, evolution, perception, learning, decision making and chronobiology of animal behaviour.</p> <p>CO 2 - To explain the evolutionary and ecological factors influencing social behaviour, the complexity of decision-making process in animals and the concepts of biological clocks.</p> <p>CO 3 - To interpret animal behaviour patterns, social behaviour dynamics, predict and manage animal physiology and behaviour, solve behavioural problems, optimise human health and well-being.</p>
12	ZU232EP1	Elective Lab Course II: Lab on Allied Botany	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To obtain comprehensive knowledge and skills to pursue higher studies in the relevant field of science.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p>	<p>PSO 1 - To develop deep understanding of the key concepts of Zoology in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Aquaculture Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 2 - To perform laboratories experiments with suitable techniques at cellular, molecular, biochemical, physiological and systematic levels.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To recognize museum specimens, stages of cleavage, vital organs, genetic diseases of human.</p> <p>CO 2 - To explain the economic importance of animals, clinical procedures, dominant and recessive characters of humans.</p> <p>CO 3 - To use the skills relevant to basic and applied Zoology for identification and differentiation of animal forms.</p>
13	ZC2031	Major Core III: Cell Biology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To identify the types of microscope, cell, cell organelles and cell division.</p> <p>CO 2 - To outline the role of cell organelles, nucleic acid and their interactions.</p> <p>CO 3 - To apply knowledge in cellular research using cytological and modern techniques.</p> <p>CO 4 - To differentiate cell types, chromosomes, cell stages, normal and abnormal cells.</p> <p>CO 5 - To apply knowledge in cellular research using cytological and modern techniques.</p>
14	ZC2032	Major Elective I: (a) Biochemistry, Biophysics and Biostatistics	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To recall the structure of atoms, biomolecules, bioinstruments, and biological data.</p> <p>CO 2 - To describe the interactions of biomolecules; importance of buffer systems, enzymes, light, bioinstrumentation and collection of biological data.</p> <p>CO 3 - To apply basic scientific methods and analysis in the fields of biochemistry, biophysics and biostatistics.</p> <p>CO 4 - To classify biological macromolecules, the techniques used in biological study, and analyse biological data using appropriate statistical methods.</p> <p>CO 5 - To evaluate the significance of biomolecules, principle of bioinstruments, statistical concepts.</p>

15	ZC2033	Major Elective I: (b) Bioinformatics	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p> <p>PO 6 - To communicate effectively and collaborate successfully with peers to become competent professionals.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To describe the computer programming languages, biological databases, search engines, sequence alignment.</p> <p>CO 2 - To differentiate internet, World Wide Web, search engines, databases and bioinformatics search engines.</p> <p>CO 3 - To retrieve nucleotide, protein sequences using bioinformatics tools.</p> <p>CO 4 - To analyse the similarity between different sequences using pairwise and multiple alignment tools.</p> <p>CO 5 - To evaluate the phylogeny of organisms using bioinformatics tools.</p> <p>CO 6 - To design drugs through data mining.</p>
16	ZC2034	Major Elective I: (c) Wildlife Biology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To identify wild life, their habitat, behavior and conflict.</p> <p>CO 2 - To interrelate human-wildlife conflict and its conservation.</p> <p>CO 3 - To apply census techniques and conservation method.</p> <p>CO 4 - To survey wildlife and related natural resources.</p>
17	ZA2031	Allied Zoology II: General Zoology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To recall the classification of animals, cells, genetic disorders in man, development of frog, structure and function of vital organs.</p> <p>CO 2 - To outline the diversity of animal forms and their cellular organization, genetic makeup, evolution and physiology.</p> <p>CO 3 - To correlate the physiological processes of animals and relationship of organs system, inheritance of characters.</p> <p>CO 4 - To recognize the major functions of organ systems in the human body and the role played by animals and evolution of animal life.</p> <p>CO 5 - To evaluate the characters, functions and genetics of diverse animals.</p>

18	ZC20S1	SLC- Ornamental Fish Culture	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To choose materials necessary for setting an aquarium, accessories, popular ornamental fishes, feed, anesthetics and disease.</p> <p>CO 2 - To demonstrate the construction of fish tanks, culture techniques and feed preparation.</p> <p>CO 3 - To establish and maintain an aquarium for commercialization.</p> <p>CO 4 - To analyse the types of tanks, physico-chemical parameters and feed relevant for ornamental fishes.</p>
19	ALS203	Add on course: Professional English for Life Sciences	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To define concepts related to communicative and digital competence.</p> <p>CO 2 - To illustrate academic writing and creativity in digital media.</p> <p>CO 3 - To apply communicative skills with digital competence in the workplace.</p> <p>CO 4 - To analyse a variety of formats, including essays, research papers, reflective writing, and critical reviews of life sciences.</p> <p>CO 5 - To analyze lectures, scripts, blogs, e-content and short films related to biology.</p>
20	ZC2041	Major Core IV: Genetics	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To recall the key concepts of heredity, population genetics, karyotyping and genetic counselling.</p> <p>CO 2 - To describe Mendelian, polygenic and cytoplasmic inheritance, chromosome mapping, nondisjunction, gene frequency and eugenics.</p> <p>CO 3 - To apply the principles of heredity to real life situations.</p> <p>CO 4 - To execute and analyze the results of genetic experimentation in animal and plant models.</p>

21	ZC2042	Major Elective II: (a) Clinical Lab Technology	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To describe the laboratory principles applied in diagnosis of disease.</p> <p>CO 2 - To classify the clinical specimens and use appropriate laboratory protocol.</p> <p>CO 3 - To prepare reagents, handle instruments, perform clinical analysis and validate the results.</p> <p>CO 4 - To develop skills necessary for higher studies or placement in clinical laboratories.</p>
22	ZC2043	Major Elective II: (b) Animal Care and Services	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To recall animal breeds and their management practices.</p> <p>CO 2 - To explain the nutritional requirement and maintenance of domestic, laboratory and pet animals.</p> <p>CO 3 - To apply animal care skills in farm practices and research laboratories.</p> <p>CO 4 - To analyze the general management of domestic, pet and laboratory animals.</p> <p>CO 5 - To assess the prophylactic measures against common disease of domestic, pet and laboratory animals.</p>
23	ZC2044	Major Elective II: (c) Entomology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To identify locally available insects, the pests of crops, stored products and medical importance.</p> <p>CO 2 - To interrelate the salient features of insect orders and utility value of various productive and beneficial insects.</p> <p>CO 3 - To apply various methods of pest management in the fields of agriculture and research.</p> <p>CO 4 - To analyse the morphology and physiology of insect pests and suggest appropriate control measures.</p> <p>CO 5 - To appraise the culture of productive and beneficial insects.</p>

24	ZC20P2	Major Practical II: Cell Biology and Genetics; Elective I and Elective II	<input checked="" type="checkbox"/>				<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To identify biomolecules, cells, chromosomes, genetic disorders and animals.</p> <p>CO 2 - To illustrate cells and its structure, biomolecules and the principles of biotechniques.</p> <p>CO 3 - To handle analytical instruments and biological samples.</p> <p>CO 4 - To analyse biochemical constituents, biological sequences and disorders.</p>
25	ZA2041	Allied Zoology II: Applied Zoology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To recall the principles of api-, seri-, and aquaculture, poultry and dairy farming.</p> <p>CO 2 - To explain the tools and techniques used in rearing practices.</p> <p>CO 3 - To practice the fundamental concepts of applied zoology in research and animal farms.</p> <p>CO 4 - To inspect the quality of honey, silk, egg, milk and fish.</p> <p>CO 5 - To evaluate the profitability of animal farms.</p> <p>CO 6 - To extend the entrepreneurial skills in establishing animal farms.</p>
26	ZA20P1	Allied Zoology II: Practical General Zoology & Applied Zoology	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To identify the different groups of invertebrate animals by observing their external characteristics.</p> <p>CO 2 - To understand the organs, organ system and their functions in lower animals.</p> <p>CO 3 - To get knowledge about the different es of life and their adaptation based on the environment.</p> <p>CO 4 - To dissect and display the internal organs and mount the mouthparts and scales of invertebrates.</p>

27	ZC20S2	SLC- Nutrition and Dietetics	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To explain the role of essential nutrients their sources and their impact on human health.</p> <p>CO 2 - To describe dietary intake of different age groups.</p> <p>CO 3 - To develop skills to to create personalised nutrition plan based on individual needs, age and gender.</p>
28	ALS204	Add on course: Professional English for Life Sciences	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p> <p>PO 6 - To communicate effectively and collaborate successfully with peers to become competent professionals.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To define concepts related to communicative and digital competence.</p> <p>CO 2 - To illustrate academic writing and creativity in digital media.</p> <p>CO 3 - To apply communicative skills with digital competence in the workplace.</p> <p>CO 4 - To analyse a variety of formats, including essays, research papers, reflective writing, and critical reviews of life sciences.</p> <p>CO 5 - To analyze lectures, scripts, blogs, e-content and short films related to biology.</p>
29	ZC20S1	Major Core V: Physiology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To recall the basic anatomy of digestive, respiratory, excretory, homeostatic, neuromuscular, endocrine and reproductive system.</p> <p>CO 2 - To describe the important physiological systems and internal regulation.</p> <p>CO 3 - To compare various organ systems and adaptations exhibited by animals.</p> <p>CO 4 - To infer the integration of activities of different organ and organ system.</p> <p>CO 5 - To interrelate different organ systems to diseases for a holistic approach to human health.</p>

30	ZC2052	Major Core VI: Biotechnology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p> <p>PO 6 - To communicate effectively and collaborate successfully with peers to become competent professionals.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To explain the basic concepts of biotechnology and nanotechnology.</p> <p>CO 2 - To recite rDNA, hybridoma technology, tissue engineering and applications of nanotechnology.</p> <p>CO 3 - To apply appropriate tools and techniques in biotechnological manipulation and problems ethically.</p> <p>CO 4 - To examine the transgenic animals, microbial and biotechnological products.</p> <p>CO 5 - To priority biotechnological techniques for the welfare of environment and society.</p>
31	ZC2053	Major Core VII: Ecology and Toxicology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p> <p>PO 6 - To communicate effectively and collaborate successfully with peers to become competent professionals.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To define abiotic, biotic and limiting factors, community structure, ecological succession, wild life conservation and toxicants.</p> <p>CO 2 - To comprehend the physical and chemical properties of environment, biological effects, biogeochemical cycles, wild life conservation, environmental pollution.</p> <p>CO 3 - To identify the biotic factors, characteristics of communities, endangered species and causes for environmental problems.</p> <p>CO 4 - To assess the structure and function of ecosystem, community, habitat for sustainable management of environmental system and for the remediation.</p> <p>CO 5 - To evaluate the impact of environment changes on the biosphere.</p> <p>CO 6 - To design and execute independent research in environmental science.</p>
32	ZC20PR	Research Project	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p> <p>PO 6 - To communicate effectively and collaborate successfully with peers to become competent professionals.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To identify a research problem relevant to the subject or society.</p> <p>CO 2 - To conduct an experiment and analyse the data.</p> <p>CO 3 - To critically analyse and interpret the results.</p> <p>CO 4 - To write research reports and present results in the scientific community.</p> <p>CO 5 - To design experiments to solve environmental and societal problems.</p>

33	ZC2061	Major Core VIII: Developmental Zoology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p> <p>PO 6 - To communicate effectively and collaborate successfully with peers to become competent professionals.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To define the concepts of reproduction, embryonic development, nucleo-cytoplasmic interaction and birth control.</p> <p>CO 2 - To outline the patterns of cleavage, morphogenetic movements, fate map, the reproductive disorders and treatment.</p> <p>CO 3 - To execute the principles of embryology in applied sciences and birth control measures.</p> <p>CO 4 - To analyze clinical implications of the development, gender based reproductive disorders and intervening mechanism.</p>
34	ZC2062	Major Core IX: Immunology and Microbiology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p> <p>PO 6 - To communicate effectively and collaborate successfully with peers to become competent professionals.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To define the components of the immune system, mechanisms of immune response, microbial diversity, infectious diseases and microbial application.</p> <p>CO 2 - To discuss the types of immune cells, immune response, taxonomic classification of microbes and their role in industries</p> <p>CO 3 - To apply the concepts of Immunology and Microbiology for interdisciplinary research and life-long learning.</p> <p>CO 4 - To analyze the role of microbes in food, air, water, soil and immune response to infection.</p>
35	ZC2063	Major Core X: Organic Evolution	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p> <p>PO 6 - To communicate effectively and collaborate successfully with peers to become competent professionals.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To recall the concepts of evolution, origin of life, geological time scale, natural selection, speciation and evidences of evolution.</p> <p>CO 2 - To discuss on the theories of evolution, isolation, variation, speciation, fossils and phylogram.</p> <p>CO 3 - To generalise experimental and natural evidences in support of evolution, genetic equilibrium, speciation, and rate of evolution.</p> <p>CO 4 - To analyse the major transitions in evolution and phylogeny of animals.</p> <p>CO 5 - To assess and report the evidences in support of natural selection, speciation and evolution.</p>

36	ZC2064	Major Elective III: (a) Economic Zoology	<input checked="" type="checkbox"/>			<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p> <p>PO 6 - To communicate effectively and collaborate successfully with peers to become competent professionals.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To recall the importance of applied area of biological sciences.</p> <p>CO 2 - To explain the rearing techniques of economically important animals.</p> <p>CO 3 - To apply the different strategies adopted in rearing of honey bee, lac insect, silkworm, fishes, fowls and dairy animals.</p> <p>CO 4 - To choose the profitable culture practices.</p> <p>CO 5 - To evaluate the profitability of animal farms.</p> <p>CO 6 - To extend the entrepreneurial skills in establishing animal farms.</p>
37	ZC2065	Major Elective III: (b) Sericulture	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p> <p>PO 6 - To communicate effectively and collaborate successfully with peers to become competent professionals.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To recognise mulberry varieties, silkworms, cocoons and silk.</p> <p>CO 2 - To interpret the importance of sericulture, nutritive value of mulberry, diseases and pest of mulberry and silkworm, grainage technology, cocoon and silk marketing.</p> <p>CO 3 - To practice sericulture and produce ecofriendly byproducts.</p> <p>CO 4 - To analyse the practices of mori- and sericulture, the quality of cocoon and silk.</p>
38	ZC2066	Major Elective III: (c) Aquaculture	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p> <p>PO 6 - To communicate effectively and collaborate successfully with peers to become competent professionals.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To recall the culture practices of cultivable aquatic organisms and their management.</p> <p>CO 2 - To explain the culture techniques of fin fish, shell fish and seaweeds.</p> <p>CO 3 - To apply the different strategies adopted in aquaculture.</p> <p>CO 4 - To assess the growth of culturable organism in all season to get extra profit via integrated farming.</p> <p>CO 5 - To evaluate the nutritive value and marketability of culturable organisms.</p> <p>CO 6 - To establish an aqua industry for self-employment.</p>

39	ZC20P3	Major Practical III Physiology and Biotechnology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To select appropriate methods in physiology and biotechnology experiments.</p> <p>CO 2 - To describe the principles of analytical instruments and its uses in physiology and biotechnology.</p> <p>CO 3 - To demonstrate scientific experiments and interpret the biological data.</p> <p>CO 4 - To estimate the effect of abiotic factors on physiological process and quantify genomic DNA.</p> <p>CO 5 - To select appropriate physiological and biotechnological techniques to analyse the biological samples.</p>
40	ZC20P4	Major Practical IV Ecology and Toxicology and Organic Evolution	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p> <p>PO 6 - To communicate effectively and collaborate successfully with peers to become competent professionals.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To recall the protocols to analyze water quality and variation in finger prints.</p> <p>CO 2 - To identify the zooplankton, serial homology, mutant forms of Drosophila, mimicking animals and fossils.</p> <p>CO 3 - To interpret the evolutionary concepts, natural selection, variations, gene frequency and prodigality of nature through experiments.</p> <p>CO 4 - To analyze physical and chemical factors of natural ecosystem and lethal concentration of pesticide.</p>
41	ZC20P5	Major Practical V Developmental Zoology and Immunology and Microbiology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p> <p>PO 6 - To communicate effectively and collaborate successfully with peers to become competent professionals.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To identify developmental stages, immune cells, lymphoid organs and microorganisms.</p> <p>CO 2 - To explain immunological and microbiological protocols.</p> <p>CO 3 - To develop skills needed for future research in developmental Zoology, immunology and microbiology and biotechnology.</p> <p>CO 4 - To differentiate the types of eggs, placenta, parts of immune system, Gram positive and negative bacteria and microbial and immunological assay applicable to clinical research.</p>
42	ZSK206	Skill Enhancement Course (SEC): Vermitechnology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p> <p>PO 6 - To communicate effectively and collaborate successfully with peers to become competent professionals.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To discuss the classification and categories of earthworms.</p> <p>CO 2 - To explain the biology of earthworms.</p> <p>CO 3 - To assess the importance of earthworms in soil fertility, medicine and pharmaceuticals.</p> <p>CO 4 - To design the methodology for vermiculture and for the production of vermicompost and vermishash.</p> <p>CO 5 - To prepare and market the vermicompost.</p>

43	ZP231CC1	Core Course - I Structure and Function of Invertebrates	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply their knowledge , analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 2 - To carry out internship programmes and research projects to develop scientific and innovative ideas through effective communication.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To develop innovative initiatives to sustain ecofriendly environment.</p> <p>PO 5 - To pursue active career, team work and using managerial skills guide people to the right destination in a smooth and efficient way.</p> <p>PO 6 - To employ appropriate analysis tools and ICT in a range of learning scenarios, demonstrating the capacity to find, assess, and apply relevant information sources.</p> <p>PO 7 - To learn independently for lifelong to execute professional, social and ethical responsibilities promoting sustainable development.</p>	<p>PSO 1 - To explain the various aspects of life sciences including Biochemistry, Cell and Molecular Biology, Biosystematics, Genetics, Evolution, Physiology, Developmental Biology, Exobiology, Immunology, Microbiology, Endocrinology, Bioinformatics, Biotechnology and Nanobiology.</p> <p>PSO 2 - To carryout experimental techniques, analyze statistically, draw conclusions, write report, present effectively and publish in indexed journals effectively.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills through industrial / field visits and internships.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p> <p>PSO 5 - To discriminate societal and environmental problems, adopt relevant technology, synthesis solution and claim for IPR .</p>	<p>CO 1 - To remember the general concepts and major groups in animal clorigin, structure, functions, and distribution of life in all its forms.</p> <p>CO 2 - To understand the evolutionary process. All are linked in a sequence of life patterns.</p> <p>CO 3 - To apply this for pre-professional work in agriculture and conservation of life forms.</p> <p>CO 4 - To analyze what lies beyond our present knowledge of life process.</p> <p>CO 5 - To evaluate and to create the perfect phylogenetic relationship in classification.</p>
44	ZP231CC2	Core Course - II: Comparative Anatomy of Vertebrates	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply their knowledge , analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 2 - To carry out internship programmes and research projects to develop scientific and innovative ideas through effective communication.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To develop innovative initiatives to sustain ecofriendly environment.</p> <p>PO 5 - To pursue active career, team work and using managerial skills guide people to the right destination in a smooth and efficient way.</p> <p>PO 6 - To employ appropriate analysis tools and ICT in a range of learning scenarios, demonstrating the capacity to find, assess, and apply relevant information sources.</p> <p>PO 7 - To learn independently for lifelong to execute professional, social and ethical responsibilities promoting sustainable development.</p>	<p>PSO 1 - To explain the various aspects of life sciences including Biochemistry, Cell and Molecular Biology, Biosystematics, Genetics, Evolution, Physiology, Developmental Biology, Exobiology, Immunology, Microbiology, Endocrinology, Bioinformatics, Biotechnology and Nanobiology.</p> <p>PSO 2 - To carryout experimental techniques, analyze statistically, draw conclusions, write report, present effectively and publish in indexed journals effectively.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills through industrial / field visits and internships.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p> <p>PSO 5 - To discriminate societal and environmental problems, adopt relevant technology, synthesis solution and claim for IPR .</p>	<p>CO 1 - To remember the general concepts and major groups in animal classification, origin, structure, functions, and distribution of life in all its forms.</p> <p>CO 2 - To understand the evolutionary process. All are linked in a sequence of life patterns.</p> <p>CO 3 - To apply this for pre-professional work in agriculture and conservation of life forms.</p> <p>CO 4 - To analyze what lies beyond our present knowledge of life process.</p> <p>CO 5 - To evaluate and to create the perfect phylogenetic relationship in classification.</p>
45	ZP231CP1	Core Lab Course – I: Lab Course in Invertebrates & Vertebrates	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply their knowledge , analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 2 - To carry out internship programmes and research projects to develop scientific and innovative ideas through effective communication.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To develop innovative initiatives to sustain ecofriendly environment.</p> <p>PO 5 - To pursue active career, team work and using managerial skills guide people to the right destination in a smooth and efficient way.</p> <p>PO 6 - To employ appropriate analysis tools and ICT in a range of learning scenarios, demonstrating the capacity to find, assess, and apply relevant information sources.</p> <p>PO 7 - To learn independently for lifelong to execute professional, social and ethical responsibilities promoting sustainable development.</p>	<p>PSO 1 - To explain the various aspects of life sciences including Biochemistry, Cell and Molecular Biology, Biosystematics, Genetics, Evolution, Physiology, Developmental Biology, Exobiology, Immunology, Microbiology, Endocrinology, Bioinformatics, Biotechnology and Nanobiology.</p> <p>PSO 2 - To carryout experimental techniques, analyze statistically, draw conclusions, write report, present effectively and publish in indexed journals effectively.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills through industrial / field visits and internships.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p> <p>PSO 5 - To discriminate societal and environmental problems, adopt relevant technology, synthesis solution and claim for IPR .</p>	<p>CO 1 - To understand the structure and functions of various systems in animals.</p> <p>CO 2 - To learn the adaptive features of different groups of animals.</p> <p>CO 3 - To learn the mounting techniques.</p> <p>CO 4 - To acquire strong knowledge on the animal skeletal system.</p>
46	ZP231DE1	Elective Course – I : a) Molecules and their interaction relevant to Biology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply their knowledge , analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 2 - To carry out internship programmes and research projects to develop scientific and innovative ideas through effective communication.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To develop innovative initiatives to sustain ecofriendly environment.</p> <p>PO 5 - To pursue active career, team work and using managerial skills guide people to the right destination in a smooth and efficient way.</p>	<p>PSO 1 - To explain the various aspects of life sciences including Biochemistry, Cell and Molecular Biology, Biosystematics, Genetics, Evolution, Physiology, Developmental Biology, Exobiology, Immunology, Microbiology, Endocrinology, Bioinformatics, Biotechnology and Nanobiology.</p> <p>PSO 2 - To carryout experimental techniques, analyze statistically, draw conclusions, write report, present effectively and publish in indexed journals effectively.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills through industrial / field visits and internships.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p> <p>PSO 5 - To discriminate societal and environmental problems, adopt relevant technology, synthesis solution and claim for IPR .</p>	<p>CO 1 - To learn the structure, properties, metabolism and bioenergetics of biomolecules.</p> <p>CO 2 - To acquire knowledge on various classes and major types of enzymes, classification, their mechanism of action and regulation.</p> <p>CO 3 - To understand the fundamentals of biophysical chemistry and biochemistry, importance and applications of methods in conforming the structure of biopolymers.</p> <p>CO 4 - To comprehend the structural organization of and proteins, carbohydrates, nucleic acids and lipids.</p> <p>CO 5 - To familiarize the use of methods for the identification, characterization and conformation of biopolymer structures.</p>

47	ZP231EC2	Elective Course – I : b) Forensic Biology	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply their knowledge , analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 2 - To carry out internship programmes and research projects to develop scientific and innovative ideas through effective communication.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To develop innovative initiatives to sustain ecofriendly environment.</p> <p>PO 5 - To pursue active career, team work and using managerial skills guide people to the right destination in a smooth and efficient way.</p> <p>PO 6 - To employ appropriate analysis tools and ICT in a range of learning scenarios, demonstrating the capacity to find, assess, and apply relevant information sources.</p> <p>PO 7 - To learn independently for lifelong to execute professional, social and ethical responsibilities promoting sustainable development.</p>	<p>PSO 1 - To explain the various aspects of life sciences including Biochemistry, Cell and Molecular Biology, Biosystematics, Genetics, Evolution, Physiology, Developmental Biology, Exobiology, Immunology, Microbiology, Endocrinology, Bioinformatics, Biotechnology and Nanobiology.</p> <p>PSO 2 - To carryout experimental techniques, analyze statistically, draw conclusions, write report, present effectively and publish in indexed journals effectively.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills through industrial / field visits and internships.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p> <p>PSO 5 - To discriminate societal and environmental problems, adopt relevant technology, synthesis solution and claim for IPR .</p>	<p>CO 1 - To recall the fundamentals of forensic biology, psychology, and criminal profiling.</p> <p>CO 2 - To outline the use of scientific evidence in a legal context using basic facts, fundamental principles, and functions of forensic science.</p> <p>CO 3 - To apply the knowledge gained on forensic, dermatoglyphic, serological and odonatalogical techniques to render forensic service during real-time crime scenes.</p> <p>CO 4 - To analyze fingerprints, personal identification evidence, bite marks and pug marks.</p> <p>CO 5 - To evaluate information to find strategies to resolve problems in forensic biology.</p>
48	ZP231EC3	Elective Course – I : c) Wildlife Management	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply their knowledge , analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 2 - To carry out internship programmes and research projects to develop scientific and innovative ideas through effective communication.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To develop innovative initiatives to sustain ecofriendly environment.</p> <p>PO 5 - To pursue active career, team work and using managerial skills guide people to the right destination in a smooth and efficient way.</p> <p>PO 6 - To employ appropriate analysis tools and ICT in a range of learning scenarios, demonstrating the capacity to find, assess, and apply relevant information sources.</p> <p>PO 7 - To learn independently for lifelong to execute professional, social and ethical responsibilities promoting sustainable development.</p>	<p>PSO 1 - To explain the various aspects of life sciences including Biochemistry, Cell and Molecular Biology, Biosystematics, Genetics, Evolution, Physiology, Developmental Biology, Exobiology, Immunology, Microbiology, Endocrinology, Bioinformatics, Biotechnology and Nanobiology.</p> <p>PSO 2 - To carryout experimental techniques, analyze statistically, draw conclusions, write report, present effectively and publish in indexed journals effectively.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills through industrial / field visits and internships.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p> <p>PSO 5 - To discriminate societal and environmental problems, adopt relevant technology, synthesis solution and claim for IPR</p>	<p>CO 1 - To develop the ability to use the fundamental principles of wildlife ecology to solve local, regional and national conservation and management issues.</p> <p>CO 2 - To develop the ability to work collaboratively on team-based projects.</p> <p>CO 3 - To demonstrate proficiency in the writing, speaking, and critical thinking skills needed to become a wildlife technician.</p> <p>CO 4 - To gain an appreciation for the modern scope of scientific inquiry in the field of wildlife conservation management.</p> <p>CO 5 - To develop an ability to analyze, present and interpret wildlife conservation management information.</p>
49	ZP231EC4	Elective Course – II : a) Biostatistics	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply their knowledge , analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 2 - To carry out internship programmes and research projects to develop scientific and innovative ideas through effective communication.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To develop innovative initiatives to sustain ecofriendly environment.</p> <p>PO 5 - To pursue active career, team work and using managerial skills guide people to the right destination in a smooth and efficient way.</p> <p>PO 6 - To employ appropriate analysis tools and ICT in a range of learning scenarios, demonstrating the capacity to find, assess, and apply relevant information sources.</p> <p>PO 7 - To learn independently for lifelong to execute professional, social and ethical responsibilities promoting sustainable development.</p>	<p>PSO 1 - To explain the various aspects of life sciences including Biochemistry, Cell and Molecular Biology, Biosystematics, Genetics, Evolution, Physiology, Developmental Biology, Exobiology, Immunology, Microbiology, Endocrinology, Bioinformatics, Biotechnology and Nanobiology.</p> <p>PSO 2 - To carryout experimental techniques, analyze statistically, draw conclusions, write report, present effectively and publish in indexed journals effectively.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills through industrial / field visits and internships.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p> <p>PSO 5 - To discriminate societal and environmental problems, adopt relevant technology, synthesis solution and claim for IPR.</p>	<p>CO 1 - To recall different biological data, methods of collection and analysis of data.</p> <p>CO 2 - To comprehend the design and application of biostatistics relevant to experimental and population studies.</p> <p>CO 3 - To acquire skills to perform various statistical analyses using modern statistical techniques and software.</p> <p>CO 4 - To analyze the data and interpret the results manually or by using software.</p> <p>CO 5 - To evaluate on the merits and limitation of practical problems in biological/ health management study as well as to propose and implement appropriate statistical design/ methods of analysis.</p>
50	ZP231EC5	Elective Course – II : b) Applied Zoology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply their knowledge , analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 2 - To carry out internship programmes and research projects to develop scientific and innovative ideas through effective communication.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To develop innovative initiatives to sustain ecofriendly environment</p> <p>PO 5 - To pursue active career, team work and using managerial skills guide people to the right destination in a smooth and efficient way.</p> <p>PO 6 - To employ appropriate analysis tools and ICT in a range of learning scenarios, demonstrating the capacity to find, assess, and apply relevant information sources.</p> <p>PO 7 - To learn independently for lifelong to execute professional, social and ethical responsibilities promoting sustainable development.</p>	<p>PSO 1 - To explain the various aspects of life sciences including Biochemistry, Cell and Molecular Biology, Biosystematics, Genetics, Evolution, Physiology, Developmental Biology, Exobiology, Immunology, Microbiology, Endocrinology, Bioinformatics, Biotechnology and Nanobiology.</p> <p>PSO 2 - To carryout experimental techniques, analyze statistically, draw conclusions, write report, present effectively and publish in indexed journals effectively.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills through industrial / field visits and internships.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p> <p>PSO 5 - To discriminate societal and environmental problems, adopt relevant technology, synthesis solution and claim for IPR .</p>	<p>CO 1 - To apply the knowledge of animal husbandry in economic development.</p> <p>CO 2 - To identify the kinds of bees and the methods of bee keeping.</p> <p>CO 3 - To rear silkworms, harvest and market the cocoons.</p> <p>CO 4 - To apply skills and experience about the management of poultry and Dairy farming.</p> <p>CO 5 - To culture of economically important finfish and shell fishes.</p>

51	ZP231EC6	Elective Course – II : c) Pest Management	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p>PO 1 - To apply their knowledge , analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 2 - To carry out internship programmes and research projects to develop scientific and innovative ideas through effective communication.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To develop innovative initiatives to sustain ecofriendly environment.</p> <p>PO 5 - To pursue active career, team work and using managerial skills guide people to the right destination in a smooth and efficient way.</p> <p>PO 6 - To employ appropriate analysis tools and ICT in a range of learning scenarios, demonstrating the capacity to find, assess, and apply relevant information sources.</p> <p>PO 7 - To learn independently for lifelong to execute professional, social and ethical responsibilities promoting sustainable development.</p>	<p>PSO 1 - To explain the various aspects of life sciences including Biochemistry, Cell and Molecular Biology, Biosystematics, Genetics, Evolution, Physiology, Developmental Biology, Exobiology, Immunology, Microbiology, Endocrinology, Bioinformatics, Biotechnology and Nanobiology</p> <p>PSO 2 - To carryout experimental techniques, analyze statistically, draw conclusions, write report, present effectively and publish in indexed journals effectively</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills through industrial / field visits and internships.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p> <p>PSO 5 - To discriminate societal and environmental problems, adopt relevant technology, synthesis solution and claim for IPR.</p>	<p>CO 1 - To outline the pest groups affecting different agricultural crops and control measures.</p> <p>CO 2 - To select correct IPM in cropping systems with traditional and alternative control measures.</p> <p>CO 3 - To analyze the impact of pesticides on environment and adopt better agricultural practices.</p> <p>CO 4 - To evaluate the control measures adopted for pests of household and stored products.</p>
52	ZP231EP1	Elective Lab Course I: Molecules and their interaction relevant to Biology & Biostatistics	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply their knowledge , analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 2 - To carry out internship programmes and research projects to develop scientific and innovative ideas through effective communication.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To develop innovative initiatives to sustain ecofriendly environment.</p> <p>PO 5 - To pursue active career, team work and using managerial skills guide people to the right destination in a smooth and efficient way.</p> <p>PO 6 - To employ appropriate analysis tools and ICT in a range of learning scenarios, demonstrating the capacity to find, assess, and apply relevant information sources.</p> <p>PO 7 - To learn independently for lifelong to execute professional, social and ethical responsibilities promoting sustainable development.</p>	<p>PSO 1 - To explain the various aspects of life sciences including Biochemistry, Cell and Molecular Biology, Biosystematics, Genetics, Evolution, Physiology, Developmental Biology, Exobiology, Immunology, Microbiology, Endocrinology, Bioinformatics, Biotechnology and Nanobiology</p> <p>PSO 2 - To carryout experimental techniques, analyze statistically, draw conclusions, write report, present effectively and publish in indexed journals effectively</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills through industrial / field visits and internships.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p> <p>PSO 5 - To discriminate societal and environmental problems, adopt relevant technology, synthesis solution and claim for IPR.</p>	<p>CO 1 - To learn and study the chemical and physical structure of biological macromolecules.</p> <p>CO 2 - To analyze the biomolecules and physicochemical parameters in samples.</p> <p>CO 3 - To analyze and interpret the collected data using statistical methods.</p> <p>CO 4 - To design biological experiments and evaluate the samples applying appropriate statistical methods.</p>
53	ZP232CC1	Core Course – III: Cellular and Molecular Biology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply their knowledge , analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 2 - To carry out internship programmes and research projects to develop scientific and innovative ideas through effective communication.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To develop innovative initiatives to sustain ecofriendly environment.</p> <p>PO 5 - To pursue active career, team work and using managerial skills guide people to the right destination in a smooth and efficient way.</p> <p>PO 6 - To employ appropriate analysis tools and ICT in a range of learning scenarios, demonstrating the capacity to find, assess, and apply relevant information sources.</p> <p>PO 7 - To learn independently for lifelong to execute professional, social and ethical responsibilities promoting sustainable development.</p>	<p>PSO 1 - To explain the various aspects of life sciences including Biochemistry, Cell and Molecular Biology, Biosystematics, Genetics, Evolution, Physiology, Developmental Biology, Exobiology, Immunology, Microbiology, Endocrinology, Bioinformatics, Biotechnology and Nanobiology.</p> <p>PSO 2 - To carryout experimental techniques, analyze statistically, draw conclusions, write report, present effectively and publish in indexed journals effectively.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills through industrial / field visits and internships.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p> <p>PSO 5 - To discriminate societal and environmental problems, adopt relevant technology, synthesis solution and claim for IPR.</p>	<p>CO 1 - To recall general concepts of cell biology and fundamental cellular structures and organelles.</p> <p>CO 2 - To explain the various cellular components and their activities.</p> <p>CO 3 - To identify the changes or losses in cell function caused by dysregulation.</p> <p>CO 4 - To compare different cellular processes, their regulation, and their significance.</p> <p>CO 5 - To assess the societal and environmental impacts through cellular and molecular research.</p>
54	ZP232CC2	Core Course – IV: Developmental Biology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply their knowledge , analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 2 - To carry out internship programmes and research projects to develop scientific and innovative ideas through effective communication.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To develop innovative initiatives to sustain ecofriendly environment.</p> <p>PO 5 - To pursue active career, team work and using managerial skills guide people to the right destination in a smooth and efficient way.</p> <p>PO 6 - To employ appropriate analysis tools and ICT in a range of learning scenarios, demonstrating the capacity to find, assess, and apply relevant information sources.</p> <p>PO 7 - To learn independently for lifelong to execute professional, social and ethical responsibilities promoting sustainable development.</p>	<p>PSO 1 - To explain the various aspects of life sciences including Biochemistry, Cell and Molecular Biology, Biosystematics, Genetics, Evolution, Physiology, Developmental Biology, Exobiology, Immunology, Microbiology, Endocrinology, Bioinformatics, Biotechnology and Nanobiology.</p> <p>PSO 2 - To carryout experimental techniques, analyze statistically, draw conclusions, write report, present effectively and publish in indexed journals effectively.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills through industrial / field visits and internships.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p> <p>PSO 5 - To discriminate societal and environmental problems, adopt relevant technology, synthesis solution and claim for IPR.</p>	<p>CO 1 - To recall and summarize the chief events in animal development, recognizing their significance and historical context</p> <p>CO 2 - To understand the different mechanisms and how extrinsic and intrinsic factors influence embryonic development in various animal embryos.</p> <p>CO 3 - To apply their knowledge to explain the role of hormones in animal development.</p> <p>CO 4 - To analyze the different stages of embryonic development and the genetic control mechanisms involved.</p> <p>CO 5 - To critically evaluate ethical issues associated with cryopreservation in mammalian reproduction.</p> <p>CO 6 - To design and propose experiments related to biochemical changes during regeneration or cryopreservation techniques.</p>

55	ZP232CP1	Core Lab Course – II: Lab Course in Cell Biology and Developmental Biology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply their knowledge , analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 2 - To carry out internship programmes and research projects to develop scientific and innovative ideas through effective communication.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To develop innovative initiatives to sustain ecofriendly environment.</p> <p>PO 5 - To pursue active career, team work and using managerial skills guide people to the right destination in a smooth and efficient way.</p> <p>PO 6 - To employ appropriate analysis tools and ICT in a range of learning scenarios, demonstrating the capacity to find, assess, and apply relevant information sources.</p> <p>PO 7 - To learn independently for lifelong to execute professional, social and ethical responsibilities promoting sustainable development.</p>	<p>PSO 1 - To explain the various aspects of life sciences including Biochemistry, Cell and Molecular Biology, Biosystematics, Genetics, Evolution, Physiology, Developmental Biology, Exobiology, Immunology, Microbiology, Endocrinology, Bioinformatics, Biotechnology and Nanobiology.</p> <p>PSO 2 - To carryout experimental techniques, analyze statistically, draw conclusions, write report, present effectively and publish in indexed journals effectively.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills through industrial / field visits and internships.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p> <p>PSO 5 - To discriminate societal and environmental problems, adopt relevant technology, synthesis solution and claim for IPR .</p>	<p>CO 1 - To recall the principles of using a micrometer for cell size determination and the stages of mitosis& meiosis and their characteristics.</p> <p>CO 2 - To comprehend the steps involved in preparing blood smears and mounting the muscle fibres using microscopy.</p> <p>CO 3 - To develop handling-skills through the wet-lab course.</p> <p>CO 4 - To interpret observations & make connections between reproductive processes and the ecological context of the organisms studied</p> <p>CO 5 - To evaluate and compare different developmental stages in chick embryos.</p>
56	ZP232EC1	Elective Course – III: a) Economic Entomology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply their knowledge , analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 2 - To carry out internship programmes and research projects to develop scientific and innovative ideas through effective communication.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To develop innovative initiatives to sustain ecofriendly environment.</p> <p>PO 5 - To pursue active career, team work and using managerial skills guide people to the right destination in a smooth and efficient way.</p> <p>PO 6 - To employ appropriate analysis tools and ICT in a range of learning scenarios, demonstrating the capacity to find, assess, and apply relevant information sources.</p> <p>PO 7 - To learn independently for lifelong to execute professional, social and ethical responsibilities promoting sustainable development.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To recall the features of various insect orders and describe the life history, social organization, and management practices of insects.</p> <p>CO 2 - To understand the biology of insects associated with medical, household, and veterinary/public health importance.</p> <p>CO 3 - To apply their knowledge of pest biology to assess damage and beneficial insect life cycles to practical rearing.</p> <p>CO 4 - To analyze the causes of pest outbreaks and the economic threshold levels.</p> <p>CO 5 - To synthesize knowledge to propose effective control measures for vectors associated with medical, household, and veterinary/public health importance.</p>
57	ZP232EC2	Elective Course – III:b) Parasitology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply their knowledge , analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 2 - To carry out internship programmes and research projects to develop scientific and innovative ideas through effective communication.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To develop innovative initiatives to sustain ecofriendly environment.</p> <p>PO 5 - To pursue active career, team work and using managerial skills guide people to the right destination in a smooth and efficient way.</p> <p>PO 6 - To employ appropriate analysis tools and ICT in a range of learning scenarios, demonstrating the capacity to find, assess, and apply relevant information sources.</p> <p>PO 7 - To learn independently for lifelong to execute professional, social and ethical responsibilities promoting sustainable development.</p>	<p>PSO 1 - To explain the various aspects of life sciences including Biochemistry, Cell and Molecular Biology, Biosystematics, Genetics, Evolution, Physiology, Developmental Biology, Exobiology, Immunology, Microbiology, Endocrinology, Bioinformatics, Biotechnology and Nanobiology.</p> <p>PSO 2 - To carryout experimental techniques, analyze statistically, draw conclusions, write report, present effectively and publish in indexed journals effectively.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills through industrial / field visits and internships.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p> <p>PSO 5 - To discriminate societal and environmental problems, adopt relevant technology, synthesis solution and claim for IPR .</p>	<p>CO 1 - To define the basic biology and life cycle of parasites including epidemiology, diagnosis, and treatment.</p> <p>CO 2 - To explain morphological characters of parasites, developmental stages and their infestation.</p> <p>CO 3 - To identify appropriate techniques and develop basic skills for detection of parasites.</p> <p>CO 4 - To analyse the medical and public health aspects of human parasitic infections.</p> <p>CO 5 - To compare the diagnostic methods of parasitic infestation in veterinary hospitals, clinics and research laboratories.</p>
58	ZP232EC3	Elective Course – III:c) Agrochemicals & Pest management	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply their knowledge , analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 2 - To carry out internship programmes and research projects to develop scientific and innovative ideas through effective communication.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To develop innovative initiatives to sustain ecofriendly environment.</p> <p>PO 5 - To pursue active career, team work and using managerial skills guide people to the right destination in a smooth and efficient way.</p> <p>PO 6 - To employ appropriate analysis tools and ICT in a range of learning scenarios, demonstrating the capacity to find, assess, and apply relevant information sources.</p> <p>PO 7 - To learn independently for lifelong to execute professional, social and ethical responsibilities promoting sustainable development.</p>	<p>PSO 1 - To explain the various aspects of life sciences including Biochemistry, Cell and Molecular Biology, Biosystematics, Genetics, Evolution, Physiology, Developmental Biology, Exobiology, Immunology, Microbiology, Endocrinology, Bioinformatics, Biotechnology and Nanobiology.</p> <p>PSO 2 - To carryout experimental techniques, analyze statistically, draw conclusions, write report, present effectively and publish in indexed journals effectively.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills through industrial / field visits and internships.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p> <p>PSO 5 - To discriminate societal and environmental problems, adopt relevant technology, synthesis solution and claim for IPR .</p>	<p>CO 1 - To outline agrochemicals, their modes of action and their fate in the agro-ecosystem.</p> <p>CO 2 - To recognize pesticide families based on their specific modes of activity.</p> <p>CO 3 - To apply appropriate pesticide management strategies by evaluating specific pest type.</p> <p>CO 4 - To analyze the impact of agrochemicals and pesticides for effective pest management.</p> <p>CO 5 - To evaluate the efficacy of organic manures, chemical fertilizers, conventional pesticides and bio-pesticides for agronomical practices.</p>

59	ZP232EC4	Elective Course – IV:a) Research methodology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply their knowledge , analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 2 - To carry out internship programmes and research projects to develop scientific and innovative ideas through effective communication.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To develop innovative initiatives to sustain ecofriendly environment.</p> <p>PO 5 - To pursue active career, team work and using managerial skills guide people to the right destination in a smooth and efficient way.</p> <p>PO 6 - To employ appropriate analysis tools and ICT in a range of learning scenarios, demonstrating the capacity to find, assess, and apply relevant information sources.</p> <p>PO 7 - To learn independently for lifelong to execute professional, social and ethical responsibilities promoting sustainable development.</p>	<p>PSO 1 - To explain the various aspects of life sciences including Biochemistry, Cell and Molecular Biology, Biosystematics, Genetics, Evolution, Physiology, Developmental Biology, Exobiology, Immunology, Microbiology, Endocrinology, Bioinformatics, Biotechnology and Nanobiology.</p> <p>PSO 2 - To carryout experimental techniques, analyze statistically, draw conclusions, write report, present effectively and publish in indexed journals effectively.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills through industrial / field visits and internships.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p> <p>PSO 5 - To discriminate societal and environmental problems, adopt relevant technology, synthesis solution and claim for IPR .</p>	<p>CO 1 - To recall the principles of laboratory equipments, research techniques and the process of scientific report writing.</p> <p>CO 2 - To explain the procedures involved in operating laboratory equipment, applying research techniques, and engaging in scientific writing.</p> <p>CO 3 - To apply biological techniques in laboratory settings to gain practical experience in research processes and scientific report writing.</p> <p>CO 4 - To analyze the principles and techniques to make wise choices in experimental design, data interpretation, and research reports in biological sciences.</p>
60	ZP232EC5	Elective Course -IV:b) Apiculture	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply their knowledge , analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 2 - To carry out internship programmes and research projects to develop scientific and innovative ideas through effective communication.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To develop innovative initiatives to sustain ecofriendly environment .</p> <p>PO 5 - To pursue active career, team work and using managerial skills guide people to the right destination in a smooth and efficient way.</p> <p>PO 6 - To employ appropriate analysis tools and ICT in a range of learning scenarios, demonstrating the capacity to find, assess, and apply relevant information sources.</p> <p>PO 7 - To learn independently for lifelong to execute professional, social and ethical responsibilities promoting sustainable development.</p>	<p>PSO 1 - To explain the various aspects of life sciences including Biochemistry, Cell and Molecular Biology, Biosystematics, Genetics, Evolution, Physiology, Developmental Biology, Exobiology, Immunology, Microbiology, Endocrinology, Bioinformatics, Biotechnology and Nanobiology.</p> <p>PSO 2 - To carryout experimental techniques, analyze statistically, draw conclusions, write report, present effectively and publish in indexed journals effectively</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills through industrial / field visits and internships.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p> <p>PSO 5 - To discriminate societal and environmental problems, adopt relevant technology, synthesis solution and claim for IPR .</p>	<p>CO 1 - To understand the morphology, life cycle, characteristics of honey bees and bee keeping.</p> <p>CO 2 - To acquire skills to perform bee keeping from managing colonies of bees in order to harvest honey and other Bee related by-products in different setups and as an Entrepreneurial venture.</p> <p>CO 3 - To knowledge on the harvesting, preserving and processing of bee products and identification of the appropriate markets to sell the produce.</p> <p>CO 4 - To identify of different bee enemies and diseases and control measures and its management</p> <p>CO 5 - To evaluate the honey chemical composition of different environment.</p>
61	ZP232EC6	Elective Course – IV:c) Sericulture	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply their knowledge , analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 2 - To carry out internship programmes and research projects to develop scientific and innovative ideas through effective communication.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To develop innovative initiatives to sustain ecofriendly environment.</p> <p>PO 5 - To pursue active career, team work and using managerial skills guide people to the right destination in a smooth and efficient way.</p> <p>PO 6 - To employ appropriate analysis tools and ICT in a range of learning scenarios, demonstrating the capacity to find, assess, and apply relevant information sources.</p> <p>PO 7 - To learn independently for lifelong to execute professional, social and ethical responsibilities promoting sustainable development.</p>	<p>PSO 1 - To explain the various aspects of life sciences including Biochemistry, Cell and Molecular Biology, Biosystematics, Genetics, Evolution, Physiology, Developmental Biology, Exobiology, Immunology, Microbiology, Endocrinology, Bioinformatics, Biotechnology and Nanobiology.</p> <p>PSO 2 - To carryout experimental techniques, analyze statistically, draw conclusions, write report, present effectively and publish in indexed journals effectively.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills through industrial / field visits and internships.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p> <p>PSO 5 - To discriminate societal and environmental problems, adopt relevant technology, synthesis solution and claim for IPR .</p>	<p>CO 1 - To recall and describe the fundamental concepts, terminology, and processes related to sericulture, and sericulture industry practices.</p> <p>CO 2 - To demonstrate the key concepts, processes, properties of silk fiber, mulberry cultivation techniques, cocoon characteristics, and the significance of sericulture practices in the silk production industry.</p> <p>CO 3 - To evaluate the effectiveness of different sericulture practices, technologies, and policies, and make informed decisions to optimize silk production.</p> <p>CO 4 - To critically analyze the challenges and opportunities in the sericulture industry and assess the economic and environmental implications of sericulture practices.</p> <p>CO 5 - To evaluate the effectiveness of different sericulture practices, technologies, and policies, and make informed decisions to optimize silk production.</p>
62	ZP232EP1	Elective Lab Course – II: Economic Entomology & Research Methodology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply their knowledge , analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 2 - To carry out internship programmes and research projects to develop scientific and innovative ideas through effective communication.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To develop innovative initiatives to sustain ecofriendly environment .</p> <p>PO 5 - To pursue active career, team work and using managerial skills guide people to the right destination in a smooth and efficient way.</p> <p>PO 6 - To employ appropriate analysis tools and ICT in a range of learning scenarios, demonstrating the capacity to find, assess, and apply relevant information sources.</p> <p>PO 7 - To learn independently for lifelong to execute professional, social and ethical responsibilities promoting sustainable development.</p>	<p>PSO 1 - To explain the various aspects of life sciences including Biochemistry, Cell and Molecular Biology, Biosystematics, Genetics, Evolution, Physiology, Developmental Biology, Exobiology, Immunology, Microbiology, Endocrinology, Bioinformatics, Biotechnology and Nanobiology.</p> <p>PSO 2 - To carryout experimental techniques, analyze statistically, draw conclusions, write report, present effectively and publish in indexed journals effectively.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills through industrial / field visits and internships.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p> <p>PSO 5 - To discriminate societal and environmental problems, adopt relevant technology, synthesis solution and claim for IPR .</p>	<p>CO 1 - To recall and describe the fundamental concepts, terminology, and processes related to sericulture, and sericulture industry practices.</p> <p>CO 2 - To demonstrate the key concepts, processes, properties of silk fiber, mulberry cultivation techniques, cocoon characteristics, and the significance of sericulture practices in the silk production industry.</p> <p>CO 3 - To evaluate the effectiveness of different sericulture practices, technologies, and policies, and make informed decisions to optimize silk production.</p> <p>CO 4 - To interpret practical solutions to address challenges in economic entomology, incorporating research methodology principles.</p> <p>CO 5 - To evaluate research methodologies and experimental designs used in economic entomology studies.</p>

63	ZP232SE1	Skill Enhancement Course I: Poultry Farming	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 2 - To carry out internship programmes and research projects to develop scientific and innovative ideas through effective communication.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To develop innovative initiatives to sustain ecofriendly environment .</p> <p>PO 5 - To pursue active career, team work and using managerial skills guide people to the right destination in a smooth and efficient way.</p> <p>PO 6 - To employ appropriate analysis tools and ICT in a range of learning scenarios, demonstrating the capacity to find, assess, and apply relevant information sources.</p> <p>PO 7 - To learn independently for lifelong to execute professional, social and ethical responsibilities promoting sustainable development.</p>	<p>PSO 1 - To explain the various aspects of life sciences including Biochemistry, Cell and Molecular Biology, Biosystematics, Genetics, Evolution, Physiology, Developmental Biology, Exobiology, Immunology, Microbiology, Endocrinology, Bioinformatics, Biotechnology and Nanobiology</p> <p>PSO 2 - To carryout experimental techniques, analyze statistically, draw conclusions, write report, present effectively and publish in indexed journals effectively</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills through industrial / field visits and internships.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p> <p>PSO 5 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To recall the key components of a poultry house to ensure optimal living conditions for poultry.</p> <p>CO 2 - To explain the different methods of rearing and the significance of proper vaccination programs in poultry farming</p> <p>CO 3 - To develop a practical feeding plan for a specific stage of poultry considering their nutritional requirements.</p> <p>CO 4 - To analyze the impact of different housing systems on poultry welfare and productivity,</p> <p>CO 5 - To critically assess the effectiveness of poultry feeds and the disease control measures in poultry farming,</p> <p>CO 6 - To design a comprehensive waste management and recycling system for poultry farms.</p>
64	PZ2031	Core IX: Physiology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To recall the structure and functions of organ systems.</p> <p>CO 2 - To describe the anatomy of different physiological systems at the tissue and cellular levels.</p> <p>CO 3 - To carry out physiological studies in the laboratory, interpret data and graphs and write a report.</p> <p>CO 5 - To analyze the physiological changes in relation to environmental conditions.</p> <p>CO 6 - To evaluate the physiological functioning of different organs.</p>
65	PZ2032	Core X: Genetics and Evolution	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To recall the principles of inheritance, mutation, genetic disorders, genetic equilibrium and patterns of evolution.</p> <p>CO 2 - To describe Linkage and crossing over, Gene concept, Hardy Weinberg law and gene frequency, principles and methods of molecular evolutionary studies.</p> <p>CO 3 - To interpret the heritability and its measurements, molecular and biochemical basis of genetic diseases, gene frequencies of population, Universal Tree of Life, cultural evolution of man.</p> <p>CO 4 - To analyse the expressivity of genes, chromosome mapping, inheritance of particular character through Pedigree chart, Factors affecting Hardy Weinberg equilibrium and phylogenetic relationship.</p> <p>CO 5 - To evaluate allelic and non-allelic interactions, effects of mutation, selection, migration, adaptation on Mendelian population.</p>
66	PZ2033	Core XI: Culture and Capture Fisheries	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To recall the culture of finfish, shellfish and their management.</p> <p>CO 2 - To describe different types of aquatic organisms, construction of ponds, nutrition and breeding in aquaculture.</p> <p>CO 3 - To relate culture practices, breeding techniques, fish pathology, fishery genetics.</p> <p>CO 4 - To analyse physico-chemical and nutritional factors for optimizing aquaculture, fish marketing and preservation.</p> <p>CO 5 - To assess profitability of an established aqua farm.</p>
67	PZ2034	Elective III: (a) General Endocrinology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To define the concepts of endocrine system, hormones, biosynthesis and pathology.</p> <p>CO 2 - To associate the role of the endocrine system in relation to homeostasis, growth, development, behaviour and environmental factors.</p> <p>CO 3 - To apply the knowledge of endocrine pathology to hormone-related disorders.</p> <p>CO 4 - To envisage women related physiological processes related to endocrine glands and hormones.</p> <p>CO 5 - To correlate endocrine regulation of growth, reproduction and metamorphosis in various invertebrates and vertebrates.</p>

68	PZ2035	Elective III: (b) Forensic Biology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To recall the fundamentals of forensic biology, psychology and criminal profiling.</p> <p>CO 2 - To outline the use of scientific evidence in a legal context using basic facts, fundamental principles and functions of forensic science.</p> <p>CO 3 - To apply the knowledge gained on forensic, dermatoglyphic, serological and odontological techniques to render forensic service during real-time crime scenes.</p> <p>CO 4 - To analyse fingerprints, personal identification evidence, bite marks and pug marks.</p> <p>CO 5 - To evaluate information to find strategies to resolve problems in forensic biology.</p>
69	PZ20PR	Research Project	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To explore new areas of research in Zoology and allied field of life science.</p> <p>CO 2 - To analyze a research problem and construct tools for data collection.</p> <p>CO 3 - To write research reports and present results in the scientific community.</p> <p>CO 4 - To develop skills to serve in Life science related industries and agencies.</p> <p>CO 5 - To develop skills to publish articles in reputed journals.</p>
70	PZ20S1	Life Science for Competitive Examinations	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To recall the terms inMolecular Cell Biology, Developmental Biology, Taxonomy, Physiology, Inheritance, Ecology and Evolution.</p> <p>CO 2 - To summarise related concepts of biology.</p> <p>CO 3 - To apply the acquired knowledge in entry level services.</p> <p>CO 4 - To analyse and interpret the concepts for research and higher education.</p>
71	PZ2041	Core XIII: Microbiology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To describe the structure, distribution and life cycle of microorganisms and their role in human welfare.</p> <p>CO 2 - To explain culture techniques, growth, fermentation and microbial products.</p> <p>CO 3 - To apply the microbiological laboratory skills in</p> <p>CO 4 - To clinical research, food industries and environmental management.</p> <p>CO 5 - To analyze beneficial and harmful microbes</p> <p>CO 6 - To evaluate the microbial importance and applications in various fields.</p>
72	PZ2042	Core XIII: Biotechnology and Nanobiology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To outline the basic concepts of Biotechnology and Nanobiology, its application and threat to the society.</p> <p>CO 2 - To apply the biotechnological principles in research and judicial use of bio- and nanotechnology to solve societal problems.</p> <p>CO 3 - To analyze the impact of biotechnological products and genetically modified organisms in bioremediation.</p> <p>CO 5 - To evaluate the function, gene modulation and their effects on improvement of crops and animals after the applications of cloned genes.</p> <p>CO 6 - To design simple experiments on biotechnology and communicate the results through publication.</p>

73	PZ2043	Core IVX: Immunology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To relate the evolution of immune molecules in different groups of animals, immunodeficiency diseases and immunotechniques.</p> <p>CO 2 - To make use of immunization schedules, differentiate the types of hypersensitive allergic reactions and symptoms.</p> <p>CO 3 - To analyse the immune response in relation to toxicants, vaccines, tumour, and infectious diseases.</p> <p>CO 4 - To evaluate the role of immune cells and humoral factors in immune response</p> <p>CO 5 - To predict immuno-nano materials for immunodiagnostic, therapeutic techniques and research.</p>
74	PZ2044	Core XV: Medical Laboratory Technology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To outline the laboratory principles applied in diagnosis of disease and methods of biomedical waste disposal.</p> <p>CO 2 - To explain the type of specimens, collection and use of appropriate diagnostic techniques.</p> <p>CO 3 - To prepare reagents, handle instruments and perform clinical analysis.</p> <p>CO 4 - To interpret and validate the results.</p>
75	PZ2045	Elective IV: (a) Parasitology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To define the basic biology and life cycle of parasites including epidemiology, diagnosis and treatment.</p> <p>CO 2 - To explain morphological characters of parasites, developmental stages and their infestation.</p> <p>CO 3 - To identify appropriate techniques and develop basic skills for detection of parasites.</p> <p>CO 4 - To analyse the medical and public health aspects of human parasitic infections.</p> <p>CO 5 - To analyse the medical and public health aspects of human parasitic infections.</p> <p>CO 6 - To compare the diagnostic methods of parasitic infestation in veterinary hospitals, clinics and research laboratories.</p>
76	PZ2046	Elective IV: (b) Applied Entomology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To identify locally available insects, the pests of agriculture, domestic animals and public health, types of infestations and their control measures.</p> <p>CO 2 - To distinguish the salient features of insects, beneficial insects, pests and their control measures.</p> <p>CO 3 - To demonstrate research and effective communication skills, to recommend the application of safer pest control measures.</p> <p>CO 4 - To analyze the types, damages and loss caused by pests and their effective control measures.</p> <p>CO 5 - To design an experiment to evaluate the effectiveness of methods of pest control.</p>
77	PZ20P3	Practical III Physiology and Genetics and Evolution	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To recall the functioning of organ and organ systems and Mendelian inheritance, population genetics, adaptive radiation and evidence of evolution.</p> <p>CO 2 - To interpret the importance of factors in physiological activities and genes in inheritance, changes in gene and gene frequencies in a population.</p> <p>CO 3 - To identify the sex and mutant forms in Drosophila, clinical features of disorders, gene frequencies in natural population.</p> <p>CO 4 - To design experiments based on Hardy-Weinberg Law, enzyme activity and effect of physical factors on physiological activities.</p>

78	PZ20P4	Practical IV Microbiology and Biotechnology and Nanobiology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To recall microbiological and biotechnological experiment protocols.</p> <p>CO 2 - To identify tools and techniques relevant to microbiology and bio-nanotechnology.</p> <p>CO 3 - To perform microbiological and biotechnological experiments pertinent for the welfare of the environment and society.</p> <p>CO 4 - To analyse the impact of microbiological, biotechnological products and genetically modified organisms in bioremediation.</p>
79	PZ20S2	Self Learning Course - Environmental Impact Assessment and Audit	<input checked="" type="checkbox"/>			<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To define activities involved in Environmental Auditing, Environmental protection and project proposals.</p> <p>CO 2 - To describe the impact of proposed developments on natural and man-made environment.</p> <p>CO 3 - To develop cognitive, technical and creative skills which enable students for life-long learning and participate in environmental protection and conservation activities for sustainable environment and gain employability.</p> <p>CO 4 - To formulate hypotheses and test them by designing appropriate experiments, analyze, interpret the data and communicate the results through effective written and oral communication.</p>
2022-2023								
80	ZC2011	Major Core I: Invertebrate Zoology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p> <p>PO 6 - To communicate effectively and collaborate successfully with peers to become competent professionals.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To identify the fundamental principles of systematics and classify according to their characters.</p> <p>CO 2 - To compare functional organization and their relationship with the environment.</p> <p>CO 3 - To apply and communicate the information about Invertebrates for life - long learning.</p> <p>CO 4 - To analyse the ecological and economic importance of invertebrates.</p> <p>CO 5 - To evaluate animal diversity and initiate their career opportunities.</p> <p>CO 6 - To observe, draw and synthesize information about invertebrates in laboratory and field conditions to enhance research.</p>
81	ALS201	Add on course: Professional English for Life Sciences 1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p> <p>PO 6 - To communicate effectively and collaborate successfully with peers to become competent professionals.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To recognise the words used in life science and improve their competence in using the language.</p> <p>CO 2 - To comprehend unfamiliar texts and describe biological processes.</p> <p>CO 3 - To apply language for speaking and writing with confidence in an intelligible and acceptable manner.</p> <p>CO 4 - To apply critical and theoretical approaches to the reading and analysis of various texts in life sciences.</p> <p>CO 5 - To analyze critically, negotiate and present without committing errors and develop entrepreneurship skills.</p>

82	ZNM201	NMEC - Public Health and Hygiene	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p> <p>PO 6 - To communicate effectively and collaborate successfully with peers to become competent professionals.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To describe personal health with respect to skin, hair, eye, ear and teeth.</p> <p>CO 2 - To explain the concepts of health and nutrition in relation to physical, mental, social and spiritual fitness.</p> <p>CO 3 - To analyse BMI and personal hygiene.</p> <p>CO 4 - To evaluate food quality, housing standards and good sanitation.</p> <p>CO 5 - To apply the knowledge of maternity, child health and Swachh Bharat Mission.</p>
83	ZC2021	Major Core II: Chordate zoology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p> <p>PO 6 - To communicate effectively and collaborate successfully with peers to become competent professionals.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To identify the systematic position and describe the biological significance of chordates.</p> <p>CO 2 - To recognize different chordates based on their salient features.</p> <p>CO 3 - To compare the morphology and anatomy of selected chordates.</p> <p>CO 4 - To assess the structural, physiological, ecological and behavioural adaptations pertaining to their mode of life.</p> <p>CO 5 - To design experiments to relate chordates with their environment.</p> <p>CO 6 - To disseminate knowledge on chordates to excel in research and entrepreneurship initiatives.</p>
84	ZC20P1	Major Practical I Invertebrate Zoology and Chordate Zoology	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p> <p>PO 6 - To communicate effectively and collaborate successfully with peers to become competent professionals.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To identify the systematic position of selected invertebrates and chordates through observation of live and preserved specimens.</p> <p>CO 2 - To describe the external morphology and biological significance of invertebrates and chordates.</p> <p>CO 3 - To apply technical and creative skills through teamwork.</p> <p>CO 4 - To analyse the different taxonomic groups based on anatomy and structural arrangements.</p>

85	ALS202	Add on course: Professional English for Life Sciences II	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p> <p>PO 6 - To communicate effectively and collaborate successfully with peers to become competent professionals.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To recognise their own ability to improve their own competence in using the language.</p> <p>CO 2 - To use language for speaking with confidence in an intelligible and acceptable manner.</p> <p>CO 3 - To understand the importance of reading for life.</p> <p>CO 4 - To understand the importance of writing in academic life.</p> <p>CO 5 - To write simple sentences without committing error of spelling or grammar.</p>
86	ZNM202	Non Major Elective: Common Ailments and Simple Remedies	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p> <p>PO 6 - To communicate effectively and collaborate successfully with peers to become competent professionals.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To enumerate the symptoms of common diseases.</p> <p>CO 2 - To summarise common health problems like anaemia, diabetes, skin and dental problems and old age ailments.</p> <p>CO 3 - To apply preventive strategies to develop healthy society.</p> <p>CO 4 - To analyse the problems of changing lifestyle and its impact on human health.</p> <p>CO 5 - To evaluate the simple remedies for common ailments.</p>
87	ZC2031	Major Core III: Cell Biology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To identify the types of microscope, cell, cell organelles and cell division.</p> <p>CO 2 - To outline the role of cell organelles, nucleic acid and their interactions.</p> <p>CO 3 - To apply knowledge in cellular research using cytological and modern techniques.</p> <p>CO 4 - To differentiate cell types, chromosomes, cell stages, normal and abnormal cells.</p> <p>CO 5 - To apply knowledge in cellular research using cytological and modern techniques.</p>
88	ZC2032	Major Elective I: (a) Biochemistry, Biophysics and Biostatistics	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To recall the structure of atoms, biomolecules, bioinstruments, and biological data.</p> <p>CO 2 - To describe the interactions of biomolecules; importance of buffer systems, enzymes, light, bioinstrumentation and collection of biological data.</p> <p>CO 3 - To apply basic scientific methods and analysis in the fields of biochemistry, biophysics and biostatistics.</p> <p>CO 4 - To classify biological macromolecules, the techniques used in biological study, and analyse biological data using appropriate statistical methods.</p> <p>CO 5 - To evaluate the significance of biomolecules, principle of bioinstruments, statistical concepts.</p>

89	ZC2033	Major Elective I: (b) Bioinformatics	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p> <p>PO 6 - To communicate effectively and collaborate successfully with peers to become competent professionals.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To describe the computer programming languages, biological databases, search engines, sequence alignment.</p> <p>CO 2 - To differentiate internet, World Wide Web, search engines, databases and bioinformatics search engines.</p> <p>CO 3 - To retrieve nucleotide, protein sequences using bioinformatics tools.</p> <p>CO 4 - To analyse the similarity between different sequences using pairwise and multiple alignment tools.</p> <p>CO 5 - To evaluate the phylogeny of organisms using bioinformatics tools.</p> <p>CO 6 - To design drugs through data mining.</p>
90	ZC2034	Major Elective I: (c) Wildlife Biology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To identify wild life, their habitat, behavior and conflict.</p> <p>CO 2 - To interrelate human-wildlife conflict and its conservation.</p> <p>CO 3 - To apply census techniques and conservation method.</p> <p>CO 4 - To survey wildlife and related natural resources.</p>
91	ZA2031	Allied Zoology II: General Zoology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To recall the classification of animals, cells, genetic disorders in man, development of frog, structure and function of vital organs.</p> <p>CO 2 - To outline the diversity of animal forms and their cellular organization, genetic makeup, evolution and physiology.</p> <p>CO 3 - To correlate the physiological processes of animals and relationship of organs system, inheritance of characters.</p> <p>CO 4 - To recognize the major functions of organ systems in the human body and the role played by animals and evolution of animal life.</p> <p>CO 5 - To evaluate the characters, functions and genetics of diverse animals.</p>

92	ZC20S1	SLC- Ornamental Fish Culture	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To choose materials necessary for setting an aquarium, accessories, popular ornamental fishes, feed, anesthetics and disease.</p> <p>CO 2 - To demonstrate the construction of fish tanks, culture techniques and feed preparatnio.</p> <p>CO 3 - To establish and maintain an aquarium for commercializatnio.</p> <p>CO 4 - To analyse the types of tanks, physico-chemical parameters and feed relevant for ornamental fishes.</p>
93	ALS203	Add on course: Professional English for Life Sciences	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To define concepts related to communicative and digital competence.</p> <p>CO 2 - To illustrate academic writing and creativity in digital media.</p> <p>CO 3 - To apply communicative skills with digital competence in the workplace.</p> <p>CO 4 - To analyse a variety of formats, including essays, research papers, reflective writing, and critical reviews of life sciences.</p> <p>CO 5 - To analyze lectures, scripts, blogs, e-content and short films related to biology.</p>
94	ZC2041	Major Core IV: Genetics	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To recall the key concepts of heredity, population genetics, karyotyping and genetic counselling.</p> <p>CO 2 - To describe Mendelian, polygenic and cytoplasmic inheritance, chromosome mapping, nondisjunction, gene frequency and eugenics.</p> <p>CO 3 - To apply the principles of heredity to real life situations.</p> <p>CO 4 - To execute and analyze the results of genetic experimentation in animal and plant models.</p>

95	ZC2042	Major Elective II: (a) Clinical Lab Technology	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To describe the laboratory principles applied in diagnosis of disease.</p> <p>CO 2 - To classify the clinical specimens and use appropriate laboratory protocol.</p> <p>CO 3 - To prepare reagents, handle instruments, perform clinical analysis and validate the results.</p> <p>CO 4 - To develop skills necessary for higher studies or placement in clinical laboratories.</p>
96	ZC2043	Major Elective II: (b) Animal Care and Services	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To recall animal breeds and their management practices.</p> <p>CO 2 - To explain the nutritional requirement and maintenance of domestic, laboratory and pet animals.</p> <p>CO 3 - To apply animal care skills in farm practices and research laboratories.</p> <p>CO 4 - To analyze the general management of domestic, pet and laboratory animals.</p> <p>CO 5 - To assess the prophylactic measures against common disease of domestic, pet and laboratory animals.</p>
97	ZC2044	Major Elective II: (c) Entomology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic dependence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To identify locally available insects, the pests of crops, stored products and medical importance.</p> <p>CO 2 - To interrelate the salient features of insect orders and utility value of various productive and beneficial insects.</p> <p>CO 3 - To apply various methods of pest management in the fields of agriculture and research.</p> <p>CO 4 - To analyse the morphology and physiology of insect pests and suggest appropriate control measures.</p> <p>CO 5 - To appraise the culture of productive and beneficial insects.</p>

98	ZC20P2	Major Practical II: Cell Biology and Genetics; Elective Land Elective II	<input checked="" type="checkbox"/>				<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To identify biomolecules, cells, chromosomes, genetic disorders and animals.</p> <p>CO 2 - To illustrate cells and its structure, biomolecules and the principles of biotechniques.</p> <p>CO 3 - To handle analytical instruments and biological samples.</p> <p>CO 4 - To analyse biochemical constituents, biological sequences and disorders.</p>
99	ZA2041	Allied Zoology II: Applied Zoology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To recall the principles of api-, seri-, and aquaculture, poultry and dairy farming.</p> <p>CO 2 - To explain the tools and techniques used in rearing practices.</p> <p>CO 3 - To practice the fundamental concepts of applied zoology in research and animal farms.</p> <p>CO 4 - To inspect the quality of honey, silk, egg, milk and fish.</p> <p>CO 5 - To evaluate the profitability of animal farms.</p> <p>CO 6 - To extend the entrepreneurial skills in establishing animal farms.</p>
100	ZA20P1	Allied Zoology II: Practical General Zoology & Applied Zoology	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To identify the different groups of invertebrate animals by observing their external characteristics.</p> <p>CO 2 - To understand the organs, organ system and their functions in lower animals.</p> <p>CO 3 - To get knowledge about the different es of life and their adaptation based on the environment.</p> <p>CO 4 - To dissect and display the internal organs and mount the mouthparts and scales of invertebrates.</p>

101	ZC20S2	SLC- Nutrition and Dietetics	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To explain the role of essential nutrients their sources and their impact on human health.</p> <p>CO 2 - To describe dietary intake of different age groups.</p> <p>CO 3 - To develop skills to to create personalised nutrition plan based on individual needs, age and gender.</p>
102	ALS204	Add on course: Professional English for Life Sciences	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p> <p>PO 6 - To communicate effectively and collaborate successfully with peers to become competent professionals.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To define concepts related to communicative and digital competence.</p> <p>CO 2 - To illustrate academic writing and creativity in digital media.</p> <p>CO 3 - To apply communicative skills with digital competence in the workplace.</p> <p>CO 4 - To analyse a variety of formats, including essays, research papers, reflective writing, and critical reviews of life sciences.</p> <p>CO 5 - To analyze lectures, scripts, blogs, e-content and short films related to biology.</p>
103	ZC20S1	Major Core V: Physiology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To recall the basic anatomy of digestive, respiratory, excretory, homeostatic, neuromuscular, endocrine and reproductive system.</p> <p>CO 2 - To describe the important physiological systems and internal regulation.</p> <p>CO 3 - To compare various organ systems and 1- adaptations exhibited by animals.infer the integration of activities of different organ and organ system.</p> <p>CO 4 - To interrelate different organ systems to diseases for a holistic approach to human health.</p>

104	ZC2052	Major Core VI: Biotechnology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p> <p>PO 6 - To communicate effectively and collaborate successfully with peers to become competent professionals.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To explain the basic concepts of biotechnology and nanotechnology.</p> <p>CO 2 - To recite rDNA, hybridoma technology, tissue engineering and applications of nanotechnology.</p> <p>CO 3 - To apply appropriate tools and techniques in biotechnological manipulation and problems ethically.</p> <p>CO 4 - To examine the transgenic animals, microbial and biotechnological products.</p> <p>CO 5 - To priority biotechnological techniques for the welfare of environment and society.</p>
105	ZC2053	Major Core VII: Ecology and Toxicology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p> <p>PO 6 - To communicate effectively and collaborate successfully with peers to become competent professionals.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To define abiotic, biotic and limiting factors, community structure, ecological succession, wild life conservation and toxicants.</p> <p>CO 2 - To comprehend the physical and chemical properties of environment, biological effects, biogeochemical cycles, wild life conservation, environmental pollution</p> <p>CO 3 - To identify the biotic factors, characteristics of communities, endangered species and causes for environmental problems.</p> <p>CO 4 - To assess the structure and function of ecosystem, community, habitat for sustainable management of environmental system and for the remediation.</p> <p>CO 5 - To evaluate the impact of environment changes on the biosphere.</p> <p>CO 6 - To design and execute independent research in environmental science.</p>
106	ZC20PR	Research Project	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p> <p>PO 6 - To communicate effectively and collaborate successfully with peers to become competent professionals.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To identify a research problem relevant to the subject or society.</p> <p>CO 2 - To conduct an experiment and analyse the data.</p> <p>CO 3 - To critically analyse and interpret the results.</p> <p>CO 4 - To write research reports and present results in the scientific community.</p> <p>CO 5 - To design experiments to solve environmental and societal problems.</p>

107	ZC2061	Major Core VIII: Developmental Zoology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p> <p>PO 6 - To communicate effectively and collaborate successfully with peers to become competent professionals.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To define the concepts of reproduction, embryonic development, nucleo-cytoplasmic interaction and birth control.</p> <p>CO 2 - To outline the patterns of cleavage, morphogenetic movements, fate map, the reproductive disorders and treatment.</p> <p>CO 3 - To execute the principles of embryology in applied sciences and birth control measures.</p> <p>CO 4 - To analyze clinical implications of the development, gender based reproductive disorders and intervening mechanism.</p>
108	ZC2062	Major Core IX: Immunology and Microbiology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p> <p>PO 6 - To communicate effectively and collaborate successfully with peers to become competent professionals.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To define the components of the immune system, mechanisms of immune response, microbial diversity, infectious diseases and microbial application.</p> <p>CO 2 - To discuss the types of immune cells, immune response, taxonomic classification of microbes and their role in industries</p> <p>CO 3 - To apply the concepts of Immunology and Microbiology for interdisciplinary research and life-long learning.</p> <p>CO 4 - To analyze the role of microbes in food, air, water, soil and immune response to infection.</p>
109	ZC2063	Major Core X: Organic Evolution	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p> <p>PO 6 - To communicate effectively and collaborate successfully with peers to become competent professionals.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To recall the concepts of evolution, origin of life, geological time scale, natural selection, speciation and evidences of evolution.</p> <p>CO 2 - To discuss on the theories of evolution, isolation, variation, speciation, fossils and phylogram.</p> <p>CO 3 - To generalise experimental and natural evidences in support of evolution, genetic equilibrium, speciation, and rate of evolution.</p> <p>CO 4 - To analyse the major transitions in evolution and phylogeny of animals.</p> <p>CO 5 - To assess and report the evidences in support of natural selection, speciation and evolution.</p>

110	ZC2064	Major Elective III: (a) Economic Zoology	<input checked="" type="checkbox"/>				<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p> <p>PO 6 - To communicate effectively and collaborate successfully with peers to become competent professionals.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To recall the importance of applied area of biological sciences.</p> <p>CO 2 - To explain the rearing techniques of economically important animals.</p> <p>CO 3 - To apply the different strategies adopted in rearing of honey bee, lac insect, silkworm, fishes, fowls and dairy animals.</p> <p>CO 4 - To choose the profitable culture practices.</p> <p>CO 5 - To evaluate the profitability of animal farms.</p> <p>CO 6 - To extend the entrepreneurial skills in establishing animal farms.</p>
111	ZC2065	Major Elective III: (b) Sericulture	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p> <p>PO 6 - To communicate effectively and collaborate successfully with peers to become competent professionals.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To recognise mulberry varieties, silkworms, cocoons and silk.</p> <p>CO 2 - To interpret the importance of sericulture, nutritive value of mulberry, diseases and pest of mulberry and silkworm, grainage technology, cocoon and silk marketing.</p> <p>CO 3 - To practice sericulture and produce ecofriendly byproducts.</p> <p>CO 4 - To analyse the practices of mori- and sericulture, the quality of cocoon and silk.</p>
112	ZC2066	Major Elective III: (c) Aquaculture	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p> <p>PO 6 - To communicate effectively and collaborate successfully with peers to become competent professionals.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To recall the culture practices of cultivable aquatic organisms and their management.</p> <p>CO 2 - To explain the culture techniques of fin fish, shell fish and seaweeds.</p> <p>CO 3 - To apply the different strategies adopted in aquaculture.</p> <p>CO 4 - To assess the growth of culturable organism in all season to get extra profit via integrated farming.</p> <p>CO 5 - To evaluate the nutritive value and marketability of culturable organisms.</p> <p>CO 6 - To establish an aqua industry for self-employment.</p>

113	ZC20P3	Major Practical III Physiology and Biotechnology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To select appropriate methods in physiology and biotechnology experiments.</p> <p>CO 2 - To describe the principles of analytical instruments and its uses in physiology and biotechnology.</p> <p>CO 3 - To demonstrate scientific experiments and interpret the biological data.</p> <p>CO 4 - To estimate the effect of abiotic factors on physiological process and quantify genomic DNA.</p> <p>CO 5 - To select appropriate physiological and biotechnological techniques to analyse the biological samples.</p>
114	ZC20P4	Major Practical IV Ecology and Toxicology and Organic Evolution	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p> <p>PO 6 - To communicate effectively and collaborate successfully with peers to become competent professionals.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To recall the protocols to analyze water quality and variation in finger prints.</p> <p>CO 2 - To identify the zooplankton, serial homology, mutant forms of Drosophila, mimicking animals and fossils.</p> <p>CO 3 - To interpret the evolutionary concepts, natural selection, variations, gene frequency and prodigality of nature through experiments.</p> <p>CO 4 - To analyze physical and chemical factors of natural ecosystem and lethal concentration of pesticide.</p>
115	ZC20P5	Major Practical V Developmental Zoology and Immunology and Microbiology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p> <p>PO 6 - To communicate effectively and collaborate successfully with peers to become competent professionals.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To identify developmental stages, immune cells, lymphoid organs and microorganisms.</p> <p>CO 2 - To explain immunological and microbiological protocols.</p> <p>CO 3 - To develop skills needed for future research in developmental Zoology, immunology and microbiology and biotechnology.</p> <p>CO 4 - To differentiate the types of eggs, placenta, parts of immune system, Gram positive and negative bacteria and microbial and immunological assay applicable to clinical research.</p>

116	ZSK206	Skill Enhancement Course (SEC): Vermitechnology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p> <p>PO 6 - To communicate effectively and collaborate successfully with peers to become competent professionals.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To discuss the classification and categories of earthworms.</p> <p>CO 2 - To explain the biology of earthworms.</p> <p>CO 3 - To assess the importance of earthworms in soil fertility, medicine and pharmaceuticals.</p> <p>CO 4 - To design the methodology for vermiculture and for the production of vermicompost and vermiwash.</p> <p>CO 5 - To prepare and market the vermicompost.</p>
117	PZ2011	Core I: Biochemistry	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To define structure and types of chemical bonds in biomolecules such as hydrogen ions, water, protein, carbohydrate, lipid, nucleotides, enzymes and vitamins.</p> <p>CO 2 - To explain the fate of biomolecules in different metabolic pathways.</p> <p>CO 3 - To apply cognitive, technical and creative skills to pursue higher studies and employability in industrial, biomedical and research laboratories.</p> <p>CO 4 - To analyse biomolecules in biological systems and relate deficiency disorders</p> <p>CO 5 - To design biochemical experiments and publish the results through effective written and oral communication after drawing accurate conclusions.</p>
118	PZ2012	Core II: Ecobiology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To explain the interaction of organisms with the physical and biological environment.</p> <p>CO 2 - To compare the differences in the structure and function of different types of ecosystems.</p> <p>CO 3 - To assess the human population increase with respect to anthropological activities and environmental impact.</p> <p>CO 4 - To formulate hypotheses and test them by designing appropriate experiments, analyze, interpret data and report.</p>
119	PZ2013	Core III: Structure and Function of Invertebrates	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain the various aspects of life sciences including Biochemistry, Cell and Molecular Biology, Genetics, Physiology, Developmental Biology, Ecobiology, Immunology, microbiology, Endocrinology, Evolution, Biotechnology and Nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills such as group work, presentation and report writing.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To recognise the organisation of coelom, mode of locomotion, nutrition, respiration, excretion and significance of larval forms of invertebrates.</p> <p>CO 2 - To comprehend the systematic position and physiological functions of vital systems in invertebrates.</p> <p>CO 3 - To apply the cognitive skills to pursue higher studies and employability relevant fields.</p> <p>CO 4 - To explore the structure and functions of vertebrates.</p>
120	PZ2014	Core IV: Comparative Anatomy of Chordates	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To explain the various aspects of life sciences including Biochemistry, Cell and Molecular Biology, Biosystematics, Genetics, Evolution, Physiology, Developmental Biology, Ecobiology, Immunology, Microbiology, Endocrinology, Bioinformatics, Biotechnology and Nanobiology.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To identify the morphology and anatomy of major groups of vertebrates.</p> <p>CO 2 - To interrelate the development of integuments, circulatory system, respiratory system, skeletal system, sense organs and nervous system.</p> <p>CO 3 - To apply the cognitive skills to pursue higher studies and gain employability in academic and research institutions.</p> <p>CO 4 - To analyse the anatomy of different groups of vertebrates.</p>

121	PZ2015	Elective I: (a) Animal Husbandry	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To acquire knowledge on Livestock resources, construction and management of Livestock farms.</p> <p>CO 2 - To identify the breeds and stages of livestock.</p> <p>CO 3 - To analyse the ethical laws formulated by the Animal Welfare Board.</p> <p>CO 4 - To develop entrepreneurial skills and gain employability in animal farms and research laboratories.</p>
122	PZ2016	Elective I: (b) Health Care	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To spell quality life and factors that determine health.</p> <p>CO 2 - To outline the concept of health and well-being, personal health care, maternal and child health, environmental and mental health, alternative medicine and first aid.</p> <p>CO 3 - To make use of the different aspects of health and well-being in day to day life.</p> <p>CO 4 - To examine personal health problems and its remedies.</p>
123	PZ2021	Core V: Biostatistics, Computer Applications and	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To choose appropriate sampling scheme and interpret biological data.</p> <p>CO 2 - To formulate hypothesis and test the significance.</p> <p>CO 3 - To apply the computer skills for biological data management and presentation.</p> <p>CO 4 - To use database similarity search and retrieval tools in sequence analysis.</p> <p>CO 5 - To develop skills in submitting molecular data to scientific community.</p>
124	PZ2022	Core VI: Cell and Molecular Biology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To recognize the structural and functional organization of plasma membrane, cell organelles, cell receptors, protein synthesis and abnormal cell growth.</p> <p>CO 2 - To illustrate cellular organization and changes occurring in cells.</p> <p>CO 3 - To analyse the prokaryotic and eukaryotic cells, flow of genetic information from DNA to protein, cell signaling and regulation of cell cycle.</p> <p>CO 4 - To evaluate the changes in the cells, cell cycle and proteins involved in the regulation and apoptosis.</p> <p>CO 5 - To apply the principles and techniques of molecular biology for research and employment.</p>
125	PZ2023	Core VII: Devel	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To discuss basic concepts and developmental processes of different organ systems and techniques in reproductive biology.</p> <p>CO 2 - To distinguish the embryonic structures, origin and development of organ systems.</p> <p>CO 3 - To analyse the regulating mechanisms of developmental processes and identify deformities.</p> <p>CO 4 - To apply knowledge to pursue higher studies and gain employability in biological research laboratories.</p>

126	PZ2024	Core VIII: Research Methodology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To demonstrate a broad range of research methodologies and their relevance to specific research problems.</p> <p>CO 2 - To operate instruments like microscope, centrifuge, pH meter and spectrometer and perform experiments on histology, chromatography and electrophoretic techniques.</p> <p>CO 3 - To use scientific methods to develop hypotheses, design and execute experiments by selecting the appropriate research techniques.</p> <p>CO 4 - To conceptualize research processes, data presentation, report writing and publication in journals.</p>
127	PZ2025	Elective II: (a) Animal Behaviour and Chronobiology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To describe animal behaviour, reflexes, biological rhythms and Chronobiology.</p> <p>CO 2 - To summarize the history of ethology, social behaviour in animals, organization of circadian system in multicellular animals.</p> <p>CO 3 - To illustrate the developing compassion towards animals, group selection, altruism, predict biological clock system, circadian pacemaker system in vertebrates.</p> <p>CO 4 - To analyse the patterns of animal behaviour and complexity of biological clock system in vertebrates.</p> <p>CO 5 - To assess the relevance of biological clocks for human welfare and taking decisions.</p>
128	PZ2026	Elective II: (b) Bioinformatics	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To describe the basics of bioinformatics.</p> <p>CO 2 - To choose bioinformatics tools and data bases.</p> <p>CO 3 - To interpret sequence alignment and alignment programs.</p> <p>CO 4 - To identify the tools for drug discovery, docking and molecular phylogeny.</p> <p>CO 5 - To use bioinformatics tools for molecular data analysis and submission.</p>
129	PZ20P1	Practical I Biochemistry and Ecobiology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To describe the knowledge necessary for professional or academic work in the field of biochemistry and ecology.</p> <p>CO 2 - To analyse the biomolecules and physico-chemical parameters in samples.</p> <p>CO 3 - To develop drawing and writing skills and design experiments.</p> <p>CO 4 - To estimate the components of an ecosystem.</p>
130	PZ20P2	Practical II Biostatistics, Computer Applications and Bioinformatics and Cell and Molecular Biology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To demonstrate a broad range of research methodologies and their relevance to specific research problems.</p> <p>CO 2 - To operate instruments like microscope, centrifuge, ph meter and spectrometer and perform experiments on histology, chromatography and electrophoretic techniques.</p> <p>CO 3 - To use scientific methods to develop hypotheses, design and execute experiments by selecting the appropriate research techniques.</p> <p>CO 4 - To conceptualize research processes, data presentation, report writing and publication in journals.</p>

131	PZ2031	Core IX: Physiology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To recall the structure and functions of organ systems.</p> <p>CO 2 - To describe the anatomy of different physiological systems at the tissue and cellular levels.</p> <p>CO 3 - To carry out physiological studies in the laboratory, interpret data and graphs and write a report.</p> <p>CO 4 - To analyze the physiological changes in relation to environmental conditions.</p> <p>CO 5 - To evaluate the physiological functioning of different organs.</p>
132	PZ2032	Core X: Genetics and Evolution	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To recall the principles of inheritance, mutation, genetic disorders, genetic equilibrium and patterns of evolution.</p> <p>CO 2 - To describe Linkage and crossing over, Gene concept, Hardy Weinberg law and gene frequency, principles and methods of molecular evolutionary studies.</p> <p>CO 3 - To interpret the heritability and its measurements, molecular and biochemical basis of genetic diseases, gene frequencies of population, Universal Tree of Life, cultural evolution of man.</p> <p>CO 4 - To analyse the expressivity of genes, chromosome mapping, inheritance of particular character through Pedigree chart, Factors affecting Hardy Weinberg equilibrium and phylogenetic relationship.</p> <p>CO 5 - To evaluate allelic and non-allelic interactions, effects of mutation, selection, migration, adaptation on Mendelian population.</p>
133	PZ2033	Core XI: Culture and Capture Fisheries	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To recall the culture of finfish, shellfish and their management.</p> <p>CO 2 - To describe different types of aquatic organisms, construction of ponds, nutrition and breeding in aquaculture.</p> <p>CO 3 - To relate culture practices, breeding techniques, fish pathology, fishery genetics.</p> <p>CO 4 - To analyse physico-chemical and nutritional factors for optimizing aquaculture, fish marketing and preservation.</p> <p>CO 5 - To assess profitability of an established aqua farm.</p>
134	PZ2034	Elective III: (a) General Endocrinology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To define the concepts of endocrine system, hormones, biosynthesis and pathology.</p> <p>CO 2 - To associate the role of the endocrine system in relation to homeostasis, growth, development, behaviour and environmental factors.</p> <p>CO 3 - To apply the knowledge of endocrine pathology to hormone-related disorders.</p> <p>CO 4 - To envisage women related physiological processes related to endocrine glands and hormones.</p> <p>CO 5 - To correlate endocrine regulation of growth, reproduction and metamorphosis in various invertebrates and vertebrates.</p>
135	PZ2035	Elective III: (b) Forensic Biology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To recall the fundamentals of forensic biology, psychology and criminal profiling.</p> <p>CO 2 - To outline the use of scientific evidence in a legal context using basic facts, fundamental principles and functions of forensic science.</p> <p>CO 3 - To apply the knowledge gained on forensic, dermatoglyphic, serological and odontological techniques to render forensic service during real-time crime scenes.</p> <p>CO 4 - To analyse fingerprints, personal identification evidence, bite marks and pug marks.</p> <p>CO 5 - To evaluate information to find strategies to resolve problems in forensic biology.</p>

136	PZZ20PR	Research Project	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To explore new areas of research in Zoology and allied field of life science.</p> <p>CO 2 - To analyze a research problem and construct tools for data collection.</p> <p>CO 3 - To write research reports and present results in the scientific community.</p> <p>CO 4 - To develop skills to serve in Life science related industries and agencies.</p> <p>CO 5 - To develop skills to publish articles in reputed journals.</p>
137	PZZ20S1	Life Science for Competitive Examinations	<input checked="" type="checkbox"/>				<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To recall the terms inMolecular Cell Biology, Developmental Biology, Taxonomy, Physiology, Inheritance, Ecology and Evolution.</p> <p>CO 2 - To summarise related concepts of biology.</p> <p>CO 3 - To apply the acquired knowledge in entry level services.</p> <p>CO 4 - To analyse and interpret the concepts for research and higher education.</p>
138	PZZ2041	Core XII: Microbiology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To describe the structure, distribution and life cycle of microorganisms and their role in human welfare.</p> <p>CO 2 - To explain culture techniques, growth, fermentation and microbial products.</p> <p>CO 3 - To apply the microbiological laboratory skills in clinical research, food industries and environmental management.</p> <p>CO 4 - To analyze beneficial and harmful microbes.</p> <p>CO 5 - To evaluate the microbial importance and applications in various fields.</p>
139	PZZ2042	Core XIII: Biotechnology and Nanobiology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To explain the various techniques used in modern biotechnology.</p> <p>CO 2 - To outline the basic concepts of Biotechnology and Nanobiology, its application and threat to the society.</p> <p>CO 3 - To apply the biotechnological principles in research and judicial use of bio- and nanotechnology to solve societal problems.</p> <p>CO 4 - To analyze the impact of biotechnological products and genetically modified organisms in bioremediation.</p> <p>CO 5 - To evaluate the function, gene modulation and their effects on improvement of crops and animals after the applications of cloned genes.</p> <p>CO 6 - To design simple experiments on biotechnology and communicate the results through publication.</p>
140	PZZ2043	Core IVX: Immunology	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To relate the evolution of immune molecules in different groups of animals, immuno deficiency diseases and immuno techniques.</p> <p>CO 2 - To make use of immunization schedules, differentiate the types of hypersensitive allergic reactions and symptoms.</p> <p>CO 3 - To analyse the immune response in relation to toxicants, vaccines, tumour, and infectious diseases.</p> <p>CO 4 - To evaluate the role of immune cells and humoral factors in immune response.</p> <p>CO 5 - To predict immuno-nano materials for immunodiagnostic, therapeutic techniques and research.</p>

141	PZ2044	Core XV: Medical Laboratory Technology		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To outline the laboratory principles applied in diagnosis of disease and methods of biomedical waste disposal.</p> <p>CO 2 - To explain the type of specimens, collection and use of appropriate diagnostic techniques.</p> <p>CO 3 - To prepare reagents, handle instruments and perform clinical analysis.</p> <p>CO 4 - To interpret and validate the results.</p>
142	PZ2045	Elective IV: (a) Parasitology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To define the basic biology and life cycle of parasites including epidemiology, diagnosis and treatment.</p> <p>CO 2 - To explain morphological characters of parasites, developmental stages and their infestation.</p> <p>CO 3 - To identify appropriate techniques and develop basic skills for detection of parasites.</p> <p>CO 4 - To analyse the medical and public health aspects of human parasitic infections.</p> <p>CO 5 - To analyse the medical and public health aspects of human parasitic infections.</p> <p>CO 6 - To compare the diagnostic methods of parasitic infestation in veterinary hospitals, clinics and research laboratories.</p>
143	PZ2046	Elective IV: (b) Applied Entomology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To identify locally available insects, the pests of agriculture, domestic animals and public health, types of infestations and their control measures.</p> <p>CO 2 - To distinguish the salient features of insects, beneficial insects, pests and their control measures.</p> <p>CO 3 - To demonstrate research and effective communication skills, to recommend the application of safer pest control measures.</p> <p>CO 4 - To analyze the types, damages and loss caused by pests and their effective control measures.</p> <p>CO 5 - To design an experiment to evaluate the effectiveness of methods of pest control.</p>
144	PZ20P3	Practical III Physiology and Genetics and Evolution	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To recall the functioning of organ and organ systems and Mendelian inheritance, population genetics, adaptive radiation and evidence of evolution.</p> <p>CO 2 - To interpret the importance of factors in physiological activities and genes in inheritance, changes in gene and gene frequencies in a population.</p> <p>CO 3 - To identify the sex and mutant forms in <i>Drosophila</i>, clinical features of disorders, gene frequencies in natural population.</p> <p>CO 4 - To design experiments based on Hardy-Weinberg Law, enzyme activity and effect of physical factors on physiological activities.</p>
145	PZ20P4	Practical IV Microbiology and Biotechnology and Nanobiology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To recall microbiological and biotechnological experiment protocols.</p> <p>CO 2 - To identify tools and techniques relevant to microbiology and bio-nanotechnology.</p> <p>CO 3 - To perform microbiological and biotechnological experiments pertinent for the welfare of the environment and society.</p> <p>CO 4 - To analyse the impact of microbiological, biotechnological products and genetically modified organisms in bioremediation.</p>

146	PZ20S2	Self Learning Course - Environmental Impact Assessment and Audit	<input checked="" type="checkbox"/>			<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To define activities involved in Environmental Auditing, Environmental protection and project proposals.</p> <p>CO 2 - To describe the impact of proposed developments on natural and man-made environment.</p> <p>CO 3 - To develop cognitive, technical and creative skills which enable students for life-long learning and participate in environmental protection and conservation activities for sustainable environment and gain employability.</p> <p>CO 4 - To formulate hypotheses and test them by designing appropriate experiments, analyze, interpret the data and communicate the results through effective written and oral communication.</p>
2021-2022								
147	ZC2011	Major Core I: Invertebrate Zoology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p> <p>PO 6 - To communicate effectively and collaborate successfully with peers to become competent professionals.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To identify the fundamental principles of systematics and classify according to their characters.</p> <p>CO 2 - To compare functional organization and their relationship with the environment.</p> <p>CO 3 - To apply and communicate the information about Invertebrates for life-long learning.</p> <p>CO 4 - To analyse the ecological and economic importance of invertebrates.</p> <p>CO 5 - To evaluate animal diversity and initiate their career opportunities.</p> <p>CO 6 - To observe, draw and synthesize information about invertebrates in laboratory and field conditions to enhance research.</p>
148	ALS201	Add on course: Professional English for Life Sciences 1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p> <p>PO 6 - To communicate effectively and collaborate successfully with peers to become competent professionals.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p> <p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology</p>	<p>CO 1 - To recognise the words used in life science and improve their competence in using the language.</p> <p>CO 2 - To comprehend unfamiliar texts and describe biological processes.</p> <p>CO 3 - To apply language for speaking and writing with confidence in an intelligible and acceptable manner.</p> <p>CO 4 - To apply critical and theoretical approaches to the reading and analysis of various texts in life sciences.</p> <p>CO 5 - To analyze critically, negotiate and present without committing errors and develop entrepreneurship skills.</p>
149	ZNM201	NMEC - Public Health and Hygiene	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p> <p>PO 6 - To communicate effectively and collaborate successfully with peers to become competent professionals.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To describe personal health with respect to skin, hair, eye, ear and teeth.</p> <p>CO 2 - To explain the concepts of health and nutrition in relation to physical, mental, social and spiritual fitness.</p> <p>CO 3 - To analyse BMI and personal hygiene.</p> <p>CO 4 - To evaluate food quality, housing standards and good sanitation.</p> <p>CO 5 - To apply the knowledge of maternity, child health and Swachh Bharat Mission.</p>

150	ZC2021	Major Core II: Chordate zoology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p> <p>PO 6 - To communicate effectively and collaborate successfully with peers to become competent professionals.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To identify the systematic position and describe the biological significance of chordates.</p> <p>CO 2 - To recognize different chordates based on their salient features.</p> <p>CO 3 - To compare the morphology and anatomy of selected chordates.</p> <p>CO 4 - To assess the structural, physiological, ecological and behavioural adaptations pertaining to their mode of life.</p> <p>CO 5 - To design experiments to relate chordates with their environment.</p> <p>CO 6 - To disseminate knowledge on chordates to excel in research and entrepreneurship initiatives.</p>
151	ZC20P1	Major Practical I Invertebrate Zoology and Chordate Zoology	<input checked="" type="checkbox"/>				<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p> <p>PO 6 - To communicate effectively and collaborate successfully with peers to become competent professionals.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To identify the systematic position of selected invertebrates and chordates through observation of live and preserved specimens.</p> <p>CO 2 - To describe the external morphology and biological significance of invertebrates and chordates.</p> <p>CO 3 - To apply technical and creative skills through teamwork.</p> <p>CO 4 - To analyse the different taxonomic groups based on anatomy and structural arrangements.</p>
152	ALS202	Add on course: Professional English for Life Sciences II	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p> <p>PO 6 - To communicate effectively and collaborate successfully with peers to become competent professionals.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To recognise their own ability to improve their own competence in using the language.</p> <p>CO 2 - To use language for speaking with confidence in an intelligible and acceptable manner.</p> <p>CO 3 - To understand the importance of reading for life.</p> <p>CO 4 - To understand the importance of writing in academic life.</p> <p>CO 5 - To write simple sentences without committing error of spelling or grammar.</p>

153	ZNM202	Non Major Elective: Common Ailments and Simple Remedies	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p> <p>PO 6 - To communicate effectively and collaborate successfully with peers to become competent professionals.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To enumerate the symptoms of common diseases.</p> <p>CO 2 - To summarise common health problems like anaemia, diabetes, skin and dental problems and old age ailments.</p> <p>CO 3 - To apply preventive strategies to develop healthy society.</p> <p>CO 4 - To analyse the problems of changing lifestyle and its impact on human health.</p> <p>CO 5 - To evaluate the simple remedies for common ailments.</p>
154	ZC2031	Major Core III - Cell Biology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To independence.handle ethical issues with social responsibility face challenging competitive examinations that offer rewarding careers.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To identify the types of microscope, cell, cell organelles and cell division.</p> <p>CO 2 - To outline the role of cell organelles, nucleic acid and their interactions.</p> <p>CO 3 - To apply knowledge in cellular research using cytological and modern techniques.</p> <p>CO 4 - To differentiate cell types, chromosomes, cell stages, normal and abnormal cells.</p> <p>CO 5 - To apply knowledge in cellular research using cytological and modern techniques.</p>
155	ZC2032	Major Elective I: (a) Biochemistry, Biophysics and Biostatistics	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To recall the structure of atoms, biomolecules, bioinstruments, and biological data.</p> <p>CO 2 - To describe the interactions of biomolecules; importance of buffer systems, enzymes, light, bioinstrumentation and collection of biological data.</p> <p>CO 3 - To apply basic scientific methods and analysis in the fields of biochemistry, biophysics and biostatistics.</p> <p>CO 4 - To classify biological macromolecules, the techniques used in biological study, and analyse biological data using appropriate statistical methods.</p> <p>CO 5 - To evaluate the significance of biomolecules, principle of bioinstruments, statistical concepts.</p>

156	ZC2033	Major Elective I: (b) Bioinformatics	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p> <p>PO 6 - To communicate effectively and collaborate successfully with peers to become competent professionals.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To describe the computer programming languages, biological databases, search engines, sequence alignment</p> <p>CO 2 - To differentiate internet, World Wide Web, search engines, databases and bioinformatics search engines.</p> <p>CO 3 - To retrieve nucleotide, protein sequences using bioinformatics tools.</p> <p>CO 4 - To analyse the similarity between different sequences using pairwise and multiple alignment to</p> <p>CO 5 - To evaluate the phylogeny of organisms using bioinformatics tools.</p> <p>CO 6 - To design drugs through data mining.</p>
157	ZC2034	Major Elective I: (c) Wildlife Biology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To identify wild life, their habitat, behavior and conflict.</p> <p>CO 2 - To interrelate human-wildlife conflict and its conservation.</p> <p>CO 3 - To apply census techniques and conservation method.</p> <p>CO 4 - To survey wildlife and related natural resources.</p>
158	ZA2031	Allied Zoology II: General Zoology	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To recall the classification of animals, cells, genetic disorders in man, development of frog, structure and function of vital organs.</p> <p>CO 2 - To outline the diversity of animal forms and their cellular organization, genetic makeup, evolution and physiology.</p> <p>CO 3 - To correlate the physiological processes of animals and relationship of organs system, inheritance of characters.</p> <p>CO 4 - To recognize the major functions of organ systems in the human body and the role played by animals and evolution of animal life.</p> <p>CO 5 - To evaluate the characters, functions and genetics of diverse animals.</p>

159	ZC20S1	SLC- Ornamental Fish Culture	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To choose materials necessary for setting an aquarium, accessories, popular ornamental fishes, feed, anesthetics and disease.</p> <p>CO 2 - To demonstrate the construction of fish tanks, culture techniques and feed preparation.</p> <p>CO 3 - To establish and maintain an aquarium for commercialization.</p> <p>CO 4 - To analyse the types of tanks, physico-chemical parameters and feed relevant for ornamental fishes.</p>
160	ALS203	Add on course: Professional English for Life Sciences	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To define concepts related to communicative and digital competence.</p> <p>CO 2 - To illustrate academic writing and creativity in digital media.</p> <p>CO 3 - To apply communicative skills with digital competence in the workplace.</p> <p>CO 4 - To analyse a variety of formats, including essays, research papers, reflective writing, and critical reviews of life sciences.</p> <p>CO 5 - To analyze lectures, scripts, blogs, e-content and short films related to biology.</p>
161	ZC2041	Major Core IV: Genetics	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To recall the key concepts of heredity, population genetics, karyotyping and genetic counselling.</p> <p>CO 2 - To describe Mendelian, polygenic and cytoplasmic inheritance, chromosome mapping, nondisjunction, gene frequency and eugenics.</p> <p>CO 3 - To apply the principles of heredity to real life situations.</p> <p>CO 4 - To execute and analyze the results of genetic experimentation in animal and plant models.</p>

162	ZC2042	Major Elective II: (a) Clinical Lab Technology	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To describe the laboratory principles applied in diagnosis of disease.</p> <p>CO 2 - To classify the clinical specimens and use appropriate laboratory protocol.</p> <p>CO 3 - To prepare reagents, handle instruments, perform clinical analysis and validate the results.</p> <p>CO 4 - To develop skills necessary for higher studies or placement in clinical laboratories.</p>
163	ZC2043	Major Elective II: (b) Animal Care and Services	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To recall animal breeds and their management practices.</p> <p>CO 2 - To explain the nutritional requirement and maintenance of domestic, laboratory and pet animals.</p> <p>CO 3 - To apply animal care skills in farm practices and research laboratories.</p> <p>CO 4 - To analyze the general management of domestic, pet and laboratory animals.</p> <p>CO 5 - To assess the prophylactic measures against common disease of domestic, pet and laboratory animals.</p>
164	ZC2044	Major Elective II: (c) Entomology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To identify locally available insects, the pests of crops, stored products and medical importance.</p> <p>CO 2 - To interrelate the salient features of insect orders and utility value of various productive and beneficial insects.</p> <p>CO 3 - To apply various methods of pest management in the fields of agriculture and research.</p> <p>CO 4 - To analyse the morphology and physiology of insect pests and suggest appropriate control measures.</p> <p>CO 5 - To appraise the culture of productive and beneficial insects.</p>

165	ZC20P2	Major Practical II: Cell Biology and Genetics; Elective Land Elective II	<input checked="" type="checkbox"/>				<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To identify biomolecules, cells, chromosomes, genetic disorders and animals.</p> <p>CO 2 - To illustrate cells and its structure, biomolecules and the principles of biotechniques.</p> <p>CO 3 - To handle analytical instruments and biological samples.</p> <p>CO 4 - To analyse biochemical constituents, biological sequences and disorders.</p>
166	ZA2041	Allied Zoology II: Applied Zoology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To recall the principles of api-, seri-, and aquaculture, poultry and dairy farming.</p> <p>CO 2 - To explain the tools and techniques used in rearing practices.</p> <p>CO 3 - To practice the fundamental concepts of applied zoology in research and animal farms.</p> <p>CO 4 - To inspect the quality of honey, silk, egg, milk and fish.</p> <p>CO 5 - To evaluate the profitability of animal farms.</p> <p>CO 6 - To extend the entrepreneurial skills in establishing animal farms.</p>
167	ZA20P1	Allied Zoology II: Practical General Zoology & Applied Zoology	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To identify the different groups of invertebrate animals by observing their external characteristics.</p> <p>CO 2 - To understand the organs, organ system and their functions in lower animals.</p> <p>CO 3 - To get knowledge about the different es of life and their adaptation based on the environment.</p> <p>CO 4 - To dissect and display the internal organs and mount the mouthparts and scales of invertebrates.</p>

168	ZC20S2	SLC- Nutrition and Dietetics	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To explain the role of essential nutrients their sources and their impact on human health.</p> <p>CO 2 - To describe dietary intake of different age groups.</p> <p>CO 3 - To develop skills to create personalised nutrition plan based on individual needs , age and gender.</p>
169	ALS204	Add on course: Professional English for Life Sciences	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p> <p>PO 6 - To communicate effectively and collaborate successfully with peers to become competent professionals.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To define concepts related to communicative and digital competence.</p> <p>CO 2 - To illustrate academic writing and creativity in digital media.</p> <p>CO 3 - To apply communicative skills with digital competence in the workplace.</p> <p>CO 4 - To analyse a variety of formats, including essays, research papers, reflective writing, and critical reviews of life sciences.</p> <p>CO 5 - To analyze lectures, scripts, blogs, e-content and short films related to biology.</p>
170	ZC1751	Major Core V - Physiology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To face challenging competitive examinations that offer rewarding careers in science and education.</p> <p>PO 6 - To impart communicative skills and ethical values.</p> <p>PO 7 - To equip students with hands on training through various courses to enhance entrepreneurship skills.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 2 - To undertake studies in different Zoological disciplines like Biochemistry, Cell Biology, Genetics, Physiology, Developmental Biology, Ecology, Evolution, Immunology, Microbiology, Biostatistics and Computer applications.</p> <p>PSO 4 - To communicate appropriately and effectively, in a scientific context using current technology.</p> <p>PSO 8 - To apply the knowledge attained from principles and concepts learnt from specific subject areas to create a local and global impact.</p>	<p>CO 1 - To understand the basic anatomy of digestive, respiratory, excretory, homeostatic, neuromuscular, endocrine and reproductive system.</p> <p>CO 2 - To describe the functional mechanism of internal regulation by different organ systems.</p> <p>CO 3 - To compare various organ systems and discuss the adaptations exhibited by animals.</p> <p>CO 4 - To analyze the reason for diseases in man and other organisms.</p> <p>CO 5 - To use anatomical knowledge to predict physiological consequences.</p>
171	ZC1752	Major Core VI - Developmental Zoology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To face challenging competitive examinations that offer rewarding careers in science and education.</p> <p>PO 6 - To impart communicative skills and ethical values.</p> <p>PO 7 - To equip students with hands on training through various courses to enhance entrepreneurship skills.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 2 - To undertake studies in different Zoological disciplines like Biochemistry, Cell Biology, Genetics, Physiology, Developmental Biology, Ecology, Evolution, Immunology, Microbiology, Biostatistics and Computer applications.</p> <p>PSO 7 - To acquire the professional skills to handle ethical and legal issues and social responsibilities.</p> <p>PSO 9 - To enhance professional empowerment to attain economic independence.</p>	<p>CO 1 - To describe cleavage, morphogenetic movements and gastrulation.</p> <p>CO 2 - To explain gametogenesis, fertilization and parthenogenesis.</p> <p>CO 3 - To describe cleavage, morphogenetic movements and gastrulation.</p> <p>CO 4 - To acquire knowledge on Organizer, gradient system foetal membranes and placentation in mammals.</p> <p>CO 5 - To demonstrate metamorphosis and regeneration.</p> <p>CO 6 - To discuss Nuclear cytoplasmic interaction, assisted reproductive technology and birth control measures.</p>

172	ZC1753	Major Core VII Ecology and Toxicology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To face challenging competitive examinations that offer rewarding careers in science and education.</p> <p>PO 6 - To impart communicative skills and ethical values.</p> <p>PO 7 - To equip students with hands on training through various courses to enhance entrepreneurship skills.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 4 - To communicate appropriately and effectively, in a scientific context using current technology.</p> <p>PSO 7 - To acquire the professional skills to handle ethical and legal issues and social responsibilities.</p> <p>PSO 8 - To apply the knowledge attained from principles and concepts learnt from specific subject areas to create a local and global impact.</p>	<p>CO 1 - To explain gametogenesis, fertilization and parthenogenesis.</p> <p>CO 2 - To describe cleavage, morphogenetic movements and gastrulation.</p> <p>CO 3 - To acquire knowledge on Organizer, gradient system foetal membranes and placentation in mammals</p> <p>CO 4 - To demonstrate metamorphosis and regeneration.</p> <p>CO 5 - To discuss Nuclear cytoplasmic interaction, assisted reproductive technology and birth control measures.</p>
173	ZC1754	Major – Elective III (a) Aquaculture	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 2 - To create innovative ideas through laboratory experiments.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To face challenging competitive examinations that offer rewarding careers in science and education.</p> <p>PO 6 - To impart communicative skills and ethical values.</p> <p>PO 7 - To equip students with hands on training through various courses to enhance entrepreneurship skills.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 5 - To develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology, Clinical Lab Technology and General Health Care.</p> <p>PSO 9 - To enhance professional empowerment to attain economic independence.</p>	<p>CO 1 - To explain the construction of aquatic ponds and water quality management.</p> <p>CO 2 - To culture finfish and shellfish and live feed organisms.</p> <p>CO 3 - To demonstrate different culture methods.</p> <p>CO 4 - To gain knowledge on artificial feed preparation, diseases and their control measures.</p> <p>CO 5 - To describe capture techniques, fish preservation and marketing.</p> <p>CO 6 - To establish aquarium as a profitable hobby.</p>
174	ZC1755	Major – Elective III (b) Sericulture	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To face challenging competitive examinations that offer rewarding careers in science and education.</p> <p>PO 6 - To impart communicative skills and ethical values.</p> <p>PO 7 - To equip students with hands on training through various courses to enhance entrepreneurship skills.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 2 - To undertake studies in different Zoological disciplines like Biochemistry, Cell Biology, Genetics, Physiology, Developmental Biology, Ecology, Evolution, Immunology, Microbiology, Biostatistics and Computer applications.</p> <p>PSO 7 - To acquire the professional skills to handle ethical and legal issues and social responsibilities.</p> <p>PSO 8 - To apply the knowledge attained from principles and concepts learnt from specific subject areas to create a local and global impact.</p> <p>PSO 9 - To enhance professional empowerment to attain economic independence.</p>	<p>CO 1 - To explain the cultivation and maintenance of mulberry plantation.</p> <p>CO 2 - To identify the diseases and pests of mulberry plant and silk worm.</p> <p>CO 3 - To rear silkworms and gain knowledge on silk reeling.</p> <p>CO 4 - To evaluate the quality of cocoon and marketing.</p> <p>CO 5 - To acquire skills necessary for self-employment in sericulture.</p>
175	ZC1756	Major – Elective III (c) Marine Biology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 2 - To create innovative ideas through laboratory experiments.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 7 - To equip students with hands on training through various courses to enhance entrepreneurship skills.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 2 - To undertake studies in different Zoological disciplines like Biochemistry, Cell Biology, Genetics, Physiology, Developmental Biology, Ecology, Evolution, Immunology, Microbiology, Biostatistics and Computer applications.</p> <p>PSO 7 - To acquire the professional skills to handle ethical and legal issues and social responsibilities.</p> <p>PSO 8 - To apply the knowledge attained from principles and concepts learnt from specific subject areas to create a local and global impact.</p>	<p>CO 1 - To explain the influence of physico-chemical factors on marine organisms.</p> <p>CO 2 - To identify the impact of waves and tides on animal and plant population.</p> <p>CO 3 - To discuss the energy flow in the marine environment.</p> <p>CO 4 - To evaluate the economic importance of marine resources and the impact of pollutants.</p> <p>CO 5 - To use scientific technology to assess quantitative parameters in relation to distribution of marine biota.</p>
176	ZC17P5	Major Practical V Physiology and Developmental Zoology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To face challenging competitive examinations that offer rewarding careers in science and education.</p> <p>PO 6 - To impart communicative skills and ethical values.</p> <p>PO 7 - To equip students with hands on training through various courses to enhance entrepreneurship skills.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 2 - To undertake studies in different Zoological disciplines like Biochemistry, Cell Biology, Genetics, Physiology, Developmental Biology, Ecology, Evolution, Immunology, Microbiology, Biostatistics and Computer applications.</p> <p>PSO 7 - To acquire the professional skills to handle ethical and legal issues and social responsibilities.</p> <p>PSO 8 - To apply the knowledge attained from principles and concepts learnt from specific subject areas to create a local and global impact.</p>	<p>CO 1 - To explain the effect of abiotic factors on physiological process.</p> <p>CO 2 - To analyse major nutrients qualitatively and describe the principles of analytical instruments and its uses in physiology.</p> <p>CO 3 - To perform scientific mode of thinking; planning experiments, analyzing and evaluating data skills as scientific laboratory reports.</p> <p>CO 4 - To develop methodological approach to embryonic development.</p> <p>CO 5 - To identify instruments, tissues, embryonic structures in preparations, photographs and diagrams.</p>

177	ZSK175	SBC- Vermitechnology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 7 - To equip students with hands on training through various courses to enhance entrepreneurship skills.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 2 - To undertake studies in different Zoological disciplines like Biochemistry, Cell Biology, Genetics, Physiology, Developmental Biology, Ecology, Evolution, Immunology, Microbiology, Biostatistics and Computer applications.</p> <p>PSO 4 - To communicate appropriately and effectively, in a scientific context using current technology.</p> <p>PSO 7 - To acquire the professional skills to handle ethical and legal issues and social responsibilities.</p>	<p>CO 1 - To discuss the classification and categories of earthworms.</p> <p>CO 2 - To explain the biology of earthworms.</p> <p>CO 3 - To assess the importance of earthworms in soil fertility, medicine and pharmaceuticals.</p> <p>CO 4 - To design the methodology for vermiculture and for the production of vermicompost and vermiwash.</p> <p>CO 5 - To prepare and market the vermicompost.</p>
178	ZC1761	Major Core VIII - Biotechnology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To face challenging competitive examinations that offer rewarding careers in science and education.</p> <p>PO 6 - To impart communicative skills and ethical values.</p> <p>PO 7 - To equip students with hands on training through various courses to enhance entrepreneurship skills.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 2 - To undertake studies in different Zoological disciplines like Biochemistry, Cell Biology, Genetics, Physiology, Developmental Biology, Ecology, Evolution, Immunology, Microbiology, Biostatistics and Computer applications.</p> <p>PSO 4 - To communicate appropriately and effectively, in a scientific context using current technology.</p> <p>PSO 7 - To acquire the professional skills to handle ethical and legal issues and social responsibilities.</p>	<p>CO 1 - To acquire knowledge of basic concepts of biotechnology and central dogma.</p> <p>CO 2 - To discuss the rDNA technology, DNA library, hybridoma technology, animal cell and tissue culture and gene therapy.</p> <p>CO 3 - To decide and apply appropriate tools and techniques in biotechnological manipulation.</p> <p>CO 4 - To explain the general principles of generating transgenic plants, animals and application of microbes pharmaceutical products.</p> <p>CO 5 - To undertake any responsibility as an individual and as a team in a multidisciplinary environment for landing in a job.</p>
179	ZC1762	Major Core IX - Immunology and microbiology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 2 - To create innovative ideas through laboratory experiments.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To face challenging competitive examinations that offer rewarding careers in science and education.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 2 - To undertake studies in different Zoological disciplines like Biochemistry, Cell Biology, Genetics, Physiology, Developmental Biology, Ecology, Evolution, Immunology, Microbiology, Biostatistics and Computer applications.</p> <p>PSO 7 - To acquire the professional skills to handle ethical and legal issues and social responsibilities.</p> <p>PSO 8 - To apply the knowledge attained from principles and concepts learnt from specific subject areas to create a local and global impact.</p>	<p>CO 1 - To identify the major components of the immune system at organ and cellular level.</p> <p>CO 2 - To discuss the types of immune response and mechanisms to eliminate antigens.</p> <p>CO 3 - To culture and identify the microorganisms based on morphological and staining techniques.</p> <p>CO 4 - To design analytical and experimental tasks involving microbiology and immunology.</p>
180	ZC1763	Major Core X - Evolutionary Biology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 2 - To create innovative ideas through laboratory experiments.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To face challenging competitive examinations that offer rewarding careers in science and education.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 2 - To undertake studies in different Zoological disciplines like Biochemistry, Cell Biology, Genetics, Physiology, Developmental Biology, Ecology, Evolution, Immunology, Microbiology, Biostatistics and Computer applications.</p> <p>PSO 6 - To plan their career goals and pursue higher studies to meet global challenges.</p>	<p>CO 1 - To explain the concepts of evolution, origin of life, geological time scale and evidences of evolution.</p> <p>CO 2 - To explain the theories of evolution, mechanism of speciation and extinction of organism.</p> <p>CO 3 - To apply Hardy-Weinberg equilibrium in population genetics.</p> <p>CO 4 - To outline the major transitions in evolution, from the origin of life to hominid evolution.</p> <p>CO 5 - To perform, analyse and report experimental observations in evolutionary biology.</p>
181	ZC1764	Major Elective IV - (a) Applied Zoology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 2 - To create innovative ideas through laboratory experiments.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To face challenging competitive examinations that offer rewarding careers in science and education.</p> <p>PO 6 - To impart communicative skills and ethical values.</p> <p>PO 7 - To equip students with hands on training through various courses to enhance entrepreneurship skills.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 2 - To undertake studies in different Zoological disciplines like Biochemistry, Cell Biology, Genetics, Physiology, Developmental Biology, Ecology, Evolution, Immunology, Microbiology, Biostatistics and Computer applications.</p> <p>PSO 4 - To communicate appropriately and effectively, in a scientific context using current technology.</p> <p>PSO 5 - To develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology, Clinical Lab Technology and General Health Care.</p> <p>PSO 7 - To acquire the professional skills to handle ethical and legal issues and social responsibilities.</p> <p>PSO 9 - To enhance professional empowerment to attain economic independence</p>	<p>CO 1 - To apply the knowledge of animal husbandry in economic development.</p> <p>CO 2 - To identify the kinds of bees and the methods of bee keeping.</p> <p>CO 3 - To rear silkworms, harvest and market the cocoons.</p> <p>CO 4 - To apply skills and experience about the management of poultry and Dairy farming.</p> <p>CO 5 - To culture of economically important finfish and shell fishes.</p>

182	ZC1765	Major Elective IV - (b) Poultry Science	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 2 - To create innovative ideas through laboratory experiments.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To face challenging competitive examinations that offer rewarding careers in science and education.</p> <p>PO 6 - To impart communicative skills and ethical values.</p> <p>PO 7 - To equip students with hands on training through various courses to enhance entrepreneurship skills.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 2 - To undertake studies in different Zoological disciplines like Biochemistry, Cell Biology, Genetics, Physiology, Developmental Biology, Ecology, Evolution, Immunology, Microbiology, Biostatistics and Computer applications.</p> <p>PSO 5 - To develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology, Clinical Lab Technology and General Health Care.</p> <p>PSO 7 - To acquire the professional skills to handle ethical and legal issues and social responsibilities.</p> <p>PSO 9 - To enhance professional empowerment to attain economic independence.</p>	<p>CO 1 - To explain different aspects of raising poultry for meat and eggs.</p> <p>CO 2 - To construct and maintain poultry house and management of poultry animals.</p> <p>CO 3 - To identify the diseases and implement control measures.</p> <p>CO 4 - To develop entrepreneurship skills and commercialize indigenous poultry farming.</p> <p>CO 5 - To provide consultancy service to the local community.</p>
183	ZC1766	Major Elective IV - (c) Pest Management	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 2 - To create innovative ideas through laboratory experiments.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To face challenging competitive examinations that offer rewarding careers in science and education.</p> <p>PO 6 - To impart communicative skills and ethical values.</p> <p>PO 7 - To equip students with hands on training through various courses to enhance entrepreneurship skills.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 2 - To undertake studies in different Zoological disciplines like Biochemistry, Cell Biology, Genetics, Physiology, Developmental Biology, Ecology, Evolution, Immunology, Microbiology, Biostatistics and Computer applications.</p> <p>PSO 5 - To develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology, Clinical Lab Technology and General Health Care.</p> <p>PSO 7 - To acquire the professional skills to handle ethical and legal issues and social responsibilities.</p> <p>PSO 9 - To enhance professional empowerment to attain economic independence.</p>	<p>CO 1 - To outline the pest groups affecting different agricultural crops and control measures.</p> <p>CO 2 - To evaluate the control measures adopted for pests of household and stored products.</p> <p>CO 3 - To select correct IPM in cropping systems with traditional and alternative control measures.</p> <p>CO 4 - To analyze the impact of pesticides on environment and adopt better agricultural practices.</p> <p>CO 5 - To pursue advanced programme in entomology and seek employment opportunities.</p>
184	ZC17P6	Practical VI Ecology and Toxicology and Evolutionary Biology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 2 - To create innovative ideas through laboratory experiments.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 3 - To demonstrate practical skills and to interpret results.</p> <p>PSO 4 - To communicate appropriately and effectively, in a scientific context using current technology.</p> <p>PSO 7 - To acquire the professional skills to handle ethical and legal issues and social responsibilities.</p>	<p>CO 1 - To analyse the quality of water samples.</p> <p>CO 2 - To examine and identify the zooplanktons.</p> <p>CO 3 - To assess the evolutionary concepts through experiments.</p> <p>CO 4 - To study the natural ecosystem and report.</p>
185	ZC17P7	Practical VII Biotechnology and Immunology and Microbiology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 2 - To create innovative ideas through laboratory experiments.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 3 - To demonstrate practical skills and to interpret results.</p> <p>PSO 4 - To communicate appropriately and effectively, in a scientific context using current technology.</p> <p>PSO 7 - To acquire the professional skills to handle ethical and legal issues and social responsibilities.</p>	<p>CO 1 - To isolate genomic DNA.</p> <p>CO 2 - To perform quantitative, immunological and microbiological analysis.</p> <p>CO 3 - To differentiate Gram positive and negative bacteria.</p> <p>CO 4 - To identify lymphoid organs in a vertebrate model.</p> <p>CO 5 - To develop skills needed for future research in immunology, microbiology and biotechnology.</p>
186	ZSK176	SBC Project	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 2 - To create innovative ideas through laboratory experiments.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 6 - To impart communicative skills and ethical values.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 2 - To undertake studies in different Zoological disciplines like Biochemistry, Cell Biology, Genetics, Physiology, Developmental Biology, Ecology, Evolution, Immunology, Microbiology, Biostatistics and Computer applications.</p> <p>PSO 3 - To demonstrate practical skills and to interpret results.</p> <p>PSO 4 - To communicate appropriately and effectively, in a scientific context using current technology.</p>	<p>CO 1 - To formulate research questions, design research methodologies, and implement data collection and analysis techniques appropriate to their field of study.</p> <p>CO 2 - To evaluate existing literature, identify gaps in knowledge, and develop innovative solutions to complex problems.</p> <p>CO 3 - To communicate research findings clearly and concisely through written reports, oral presentations, and visual aids, tailored to diverse audiences.</p> <p>CO 4 - To apply ethical standards in research, including issues related to plagiarism, data integrity, and the responsible use of human and animal subjects.</p> <p>CO 5 - To experience in both collaborative and independent research environments, developing teamwork skills and the ability to manage and complete projects autonomously.</p>

187	PZ2011	Core I: Biochemistry	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To define structure and types of chemical bonds in biomolecules such as hydrogen ions, water, protein, carbohydrate, lipid, nucleotides, enzymes and vitamins.</p> <p>CO 2 - To explain the fate of biomolecules in different metabolic pathways.</p> <p>CO 3 - To apply cognitive, technical and creative skills to pursue higher studies and employability in industrial, biomedical and research laboratories.</p> <p>CO 4 - To analyse biomolecules in biological systems and relate deficiency disorders.</p> <p>CO 5 - To design biochemical experiments and publish the results through effective written and oral communication after drawing accurate conclusions.</p>
188	PZ2012	Core II: Ecobiology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To explain the interaction of organisms with the physical and biological environment.</p> <p>CO 2 - To compare the differences in the structure and function of different types of ecosystems.</p> <p>CO 3 - To assess the human population increase with respect to anthropological activities and environmental impact.</p> <p>CO 4 - To formulate hypotheses and test them by designing appropriate experiments, analyze, interpret data and report.</p>
189	PZ2013	Core III: Structure and Function of Invertebrates	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain the various aspects of life sciences including Biochemistry, Cell and Molecular Biology, Genetics, Physiology, Developmental Biology, Ecobiology, Immunology, microbiology, Endocrinology, Evolution, Biotechnology and Nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills such as group work, presentation and report writing.</p> <p>PSO 4 - To develop competence in the design and execution of research.</p> <p>PSO 5 - To independently assemble facts, summarize and draw conclusions from</p>	<p>CO 1 - To recognise the organisation of coelom, mode of locomotion, nutrition, respiration, excretion and significance of larval forms of invertebrates.</p> <p>CO 2 - To comprehend the systematic position and physiological functions of vital systems in invertebrates.</p> <p>CO 3 - To apply the cognitive skills to pursue higher studies and employability relevant fields.</p> <p>CO 4 - To explore the structure and functions of vertebrates.</p>
190	PZ2014	Core IV: Comparative Anatomy of Chordates	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To identify the morphology and anatomy of major groups of vertebrates.</p> <p>CO 2 - To interrelate the development of integuments, circulatory system, respiratory system, skeletal system, sense organs and nervous system.</p> <p>CO 3 - To apply the cognitive skills to pursue higher studies and gain employability in academic and research institutions.</p> <p>CO 4 - To analyse the anatomy of different groups of vertebrates.</p>
191	PZ2015	Elective I: (a) Animal Husbandry	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To acquire knowledge on Livestock resources, construction and management of Livestock farms.</p> <p>CO 2 - To identify the breeds and stages of livestock.</p> <p>CO 3 - To analyse the ethical laws formulated by the Animal Welfare Board.</p> <p>CO 4 - To develop entrepreneurial skills and gain employability in animal farms and research laboratories.</p>

192	PZ2016	Elective I: (b) Health Care	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To spell quality life and factors that determine health.</p> <p>CO 2 - To outline the concept of health and well-being, personal health care, maternal and child health, environmental and mental health, alternative medicine and first aid.</p> <p>CO 3 - To make use of the different aspects of health and well-being in day to day life.</p> <p>CO 4 - To examine personal health problems and its remedies.</p>
193	PZ2021	Core V: Biostatistics, Computer Applications and Bioinformatics.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To choose appropriate sampling scheme and interpret biological data.</p> <p>CO 2 - To formulate hypothesis and test the significance.</p> <p>CO 3 - To apply the computer skills for biological data management and presentation.</p> <p>CO 4 - To use database similarity search and retrieval tools in sequence analysis.</p> <p>CO 5 - To develop skills in submitting molecular data to scientific community.</p>
194	PZ2022	Core VI: Cell and Molecular Biology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To recognize the structural and functional organization of plasma membrane, cell organelles, cell receptors, protein synthesis and abnormal cell growth.</p> <p>CO 2 - To illustrate cellular organization and changes occurring in cells.</p> <p>CO 3 - To analyse the prokaryotic and eukaryotic cells, flow of genetic information from DNA to protein, cell signaling and regulation of cell cycle.</p> <p>CO 4 - To evaluate the changes in the cells, cell cycle and proteins involved in the regulation and apoptosis.</p> <p>CO 5 - To apply the principles and techniques of molecular biology for research and employment.</p>
195	PZ2023	Core VII: Developmental Biology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To discuss basic concepts and developmental processes of different organ systems and techniques in reproductive biology.</p> <p>CO 2 - To distinguish the embryonic structures, origin and development of organ systems.</p> <p>CO 3 - To analyse the regulating mechanisms of developmental processes and identify deformities.</p> <p>CO 4 - To apply knowledge to pursue higher studies and gain employability in biological research laboratories.</p>
196	PZ2024	Core VIII : Research Methodology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To demonstrate a broad range of research methodologies and their relevance to specific research problems.</p> <p>CO 2 - To operate instruments like microscope, centrifuge, pH meter and spectrometer and perform experiments on histology, chromatography and electrophoretic techniques.</p> <p>CO 3 - To use scientific methods to develop hypotheses, design and execute experiments by selecting the appropriate research techniques.</p> <p>CO 4 - To conceptualize research processes, data presentation, report writing and publication in journals.</p>

197	PZ2025	Elective II: (a) Animal Behaviour and Chronobiology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To describe animal behaviour, reflexes, biological rhythms and Chronobiology.</p> <p>CO 2 - To summarize the history of ethology, social behaviour in animals, organization of circadian system in multicellular animals.</p> <p>CO 3 - To illustrate the developing compassion towards animals, group selection, altruism, predict biological clock system, circadian pacemaker system in vertebrates.</p> <p>CO 4 - To analyse the patterns of animal behaviour and complexity of biological clock system in vertebrates.</p> <p>CO 5 - To assess the relevance of biological clocks for human welfare and taking decisions.</p>
198	PZ2026	Elective II: (b) Bioinformatics	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To describe the basics of bioinformatics.</p> <p>CO 2 - To choose bioinformatics tools and data bases.</p> <p>CO 3 - To interpret sequence alignment and alignment programs.</p> <p>CO 4 - To identify the tools for drug discovery, docking and molecular phylogeny.</p> <p>CO 5 - To use bioinformatics tools for molecular data analysis and submission.</p>
199	PZ20P1	Practical I Biochemistry and Ecology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To describe the knowledge necessary for professional or academic work in the field of biochemistry and ecology.</p> <p>CO 2 - To analyse the biomolecules and physico-chemical parameters in samples.</p> <p>CO 3 - To develop drawing and writing skills and design experiments.</p> <p>CO 4 - To estimate the components of an ecosystem.</p>
200	PZ20P2	Practical II Biostatistics, Computer Applications and Bioinformatics and Cell and Molecular Biology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To demonstrate a broad range of research methodologies and their relevance to specific research problems.</p> <p>CO 2 - To operate instruments like microscope, centrifuge, ph meter and spectrometer and perform experiments on histology, chromatography and electrophoretic techniques.</p> <p>CO 3 - To use scientific methods to develop hypotheses, design and execute experiments by selecting the appropriate research techniques.</p> <p>CO 4 - To conceptualize research processes, data presentation, report writing and publication in journals.</p>
201	PZ2031	Core IX: Physiology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To recall the structure and functions of organ systems.</p> <p>CO 2 - To describe the anatomy of different physiological systems at the tissue and cellular levels.</p> <p>CO 3 - To carry out physiological studies in the laboratory, interpret data and graphs and write a report.</p> <p>CO 4 - To analyze the physiological changes in relation to environmental conditions.</p> <p>CO 5 - To evaluate the physiological functioning of different organs.</p>

202	PZ2032	Core X: Genetics and Evolution	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To recall the principles of inheritance, mutation, genetic disorders, genetic equilibrium and patterns of evolution.</p> <p>CO 2 - To describe Linkage and crossing over, Gene concept, Hardy Weinberg law and gene frequency, principles and methods of molecular evolutionary studies.</p> <p>CO 3 - To interpret the heritability and its measurements, molecular and biochemical basis of genetic diseases, gene frequencies of population, Universal Tree of Life, cultural evolution of man.</p> <p>CO 4 - To analyse the expressivity of genes, chromosome mapping, inheritance of particular character through Pedigree chart, Factors affecting Hardy Weinberg equilibrium and phylogenetic relationship.</p> <p>CO 5 - To evaluate allelic and non-allelic interactions, effects of mutation, selection, migration, adaptation on Mendelian population.</p>
203	PZ2033	Core XI: Culture and Capture Fisheries	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To recall the culture of finfish, shellfish and their management.</p> <p>CO 2 - To describe different types of aquatic organisms, construction of ponds, nutrition and breeding in aquaculture.</p> <p>CO 3 - To relate culture practices, breeding techniques, fish pathology, fishery genetics.</p> <p>CO 4 - To analyse physico-chemical and nutritional factors for optimizing aquaculture, fish marketing and preservation.</p> <p>CO 5 - To assess profitability of an established aqua farm.</p>
204	PZ2034	Elective III: (a) General Endocrinology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To define the concepts of endocrine system, hormones, biosynthesis and pathology.</p> <p>CO 2 - To associate the role of the endocrine system in relation to homeostasis, growth, development, behaviour and environmental factors.</p> <p>CO 3 - To apply the knowledge of endocrine pathology to hormone-related disorders.</p> <p>CO 4 - To envisage women related physiological processes related to endocrine glands and hormones.</p> <p>CO 5 - To correlate endocrine regulation of growth, reproduction and metamorphosis in various invertebrates and vertebrates.</p>
205	PZ2035	Elective III: (b) Forensic Biology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To recall the fundamentals of forensic biology, psychology and criminal profiling.</p> <p>CO 2 - To outline the use of scientific evidence in a legal context using basic facts, fundamental principles and functions of forensic science.</p> <p>CO 3 - To apply the knowledge gained on forensic, dermatoglyphic, serological and odontological techniques to render forensic service during real-time crime scenes.</p> <p>CO 4 - To analyse fingerprints, personal identification evidence, bite marks and pug marks.</p> <p>CO 5 - To evaluate information to find strategies to resolve problems in forensic biology.</p>
206	PZ20PR	Research Project	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To explore new areas of research in Zoology and allied field of life science.</p> <p>CO 2 - To analyze a research problem and construct tools for data collection.</p> <p>CO 3 - To write research reports and present results in the scientific community.</p> <p>CO 4 - To develop skills to serve in Life science related industries and agencies.</p> <p>CO 5 - To develop skills to publish articles in reputed journals.</p>

207	PZ20S1	Life Science for Competitive Examinations	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To recall the terms inMolecular Cell Biology, Developmental Biology, Taxonomy, Physiology, Inheritance, Ecology and Evolution.</p> <p>CO 2 - To summarise related concepts of biology.</p> <p>CO 3 - To apply the acquired knowledge in entry level services.</p> <p>CO 4 - To analyse and interpret the concepts for research and higher education.</p>
208	PZ2041	Core XII: Microbiology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To describe the structure, distribution and life cycle of microorganisms and their role in human welfare.</p> <p>CO 2 - To explain culture techniques, growth, fermentation and microbial products.</p> <p>CO 3 - To apply the microbiological laboratory skills in</p> <p>CO 4 - To clinical research, food industries and environmental management.</p> <p>CO 5 - To analyze beneficial and harmful microbes.</p> <p>CO 6 - To evaluate the microbial importance and applications in various fields.</p>
209	PZ2042	Core XIII: Biotechnology and Nanobiology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To outline the basic concepts of Biotechnology and Nanobiology, its application and threat to the society.</p> <p>CO 2 - To apply the biotechnological principles in research and judicial use of bio- and nanotechnology to solve societal problems.</p> <p>CO 3 - To analyze the impact of biotechnological products and genetically modified organisms in bioremediation.</p> <p>CO 5 - To evaluate the function, gene modulation and their effects on improvement of crops and animals after the applications of cloned genes.</p> <p>CO 6 - To design simple experiments on biotechnology and communicate the results through publication.</p>
210	PZ2043	Core IVX: Immunology	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To relate the evolution of immune molecules in different groups of animals, immuno deficiency diseases and immuno techniques.</p> <p>CO 2 - To make use of immunization schedules, differentiate the types of hypersensitive allergic reactions and symptoms.</p> <p>CO 3 - To analyse the immune response in relation to toxicants, vaccines, tumour, and infectious diseases.</p> <p>CO 4 - To evaluate the role of immune cells and humoral factors in immune response</p> <p>CO 5 - To predict immuno-nano materials for immuno diagnostic, therapeutic techniques and research.</p>
211	PZ2044	Core XV: Medical Laboratory Technology	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To outline the laboratory principles applied in diagnosis of disease and methods of biomedical waste disposal.</p> <p>CO 2 - To explain the type of specimens, collection and use of appropriate diagnostic techniques.</p> <p>CO 3 - To prepare reagents, handle instruments and perform clinical analysis.</p> <p>CO 4 - To interpret and validate the results.</p>

212	PZ2045	Elective IV: (a) Parasitology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To define the basic biology and life cycle of parasites including epidemiology, diagnosis and treatment.</p> <p>CO 2 - To explain morphological characters of parasites, developmental stages and their infestation.</p> <p>CO 3 - To identify appropriate techniques and develop basic skills for detection of parasites.</p> <p>CO 4 - To analyse the medical and public health aspects of human parasitic infections.</p> <p>CO 5 - To analyse the medical and public health aspects of human parasitic infections.</p> <p>CO 6 - To compare the diagnostic methods of parasitic infestation in veterinary hospitals, clinics and research laboratories.</p>	
213	PZ2046	Elective IV: (b) Applied Entomology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To identify locally available insects, the pests of agriculture, domestic animals and public health, types of infestations and their control measures.</p> <p>CO 2 - To distinguish the salient features of insects, beneficial insects, pests and their control measures.</p> <p>CO 3 - To demonstrate research and effective communication skills, to recommend the application of safer pest control measures.</p> <p>CO 4 - To analyze the types, damages and loss caused by pests and their effective control measures.</p> <p>CO 5 - To design an experiment to evaluate the effectiveness of methods of pest control.</p>	
214	PZ20P3	Practical III Physiology and Genetics and Evolution	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To recall the functioning of organ and organ systems and Mendelian inheritance, population genetics, adaptive radiation and evidence of evolution.</p> <p>CO 2 - To interpret the importance of factors in physiological activities and genes in inheritance, changes in gene and gene frequencies in a population.</p> <p>CO 3 - To identify the sex and mutant forms in Drosophila, clinical features of disorders, gene frequencies in natural population.</p> <p>CO 4 - To design experiments based on Hardy-Weinberg Law, enzyme activity and effect of physical factors on physiological activities.</p>	
215	PZ20P4	Practical IV Microbiology and Biotechnology and Nanobiology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To recall microbiological and biotechnological experiment protocols.</p> <p>CO 2 - To identify tools and techniques relevant to microbiology and bio-nanotechnology.</p> <p>CO 3 - To perform microbiological and biotechnological experiments pertinent for the welfare of the environment and society.</p> <p>CO 4 - To analyse the impact of microbiological, biotechnological products and genetically modified organisms in bioremediation.</p>	
216	PZ20S2	Self Learning Course - Environmental Impact Assessment and Audit	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To define activities involved in Environmental Auditing, Environmental protection and project proposals.</p> <p>CO 2 - To describe the impact of proposed developments on natural and man-made environment.</p> <p>CO 3 - To develop cognitive, technical and creative skills which enable students for life-long learning and participate in environmental protection and conservation activities for sustainable environment and gain employability.</p> <p>CO 4 - To formulate hypotheses and test them by designing appropriate experiments, analyze, interpret the data and communicate the results through effective written and oral communication.</p>	
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217	ZC2011	Major Core I: Invertebrate Zoology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p> <p>PO 6 - To communicate effectively and collaborate successfully with peers to become competent professionals.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To identify the fundamental principles of systematics and classify according to their characters.</p> <p>CO 2 - To compare functional organization and their relationship with the environment.</p> <p>CO 3 - To apply and communicate the information about Invertebrates for life-long learning.</p> <p>CO 4 - To analyse the ecological and economic importance of invertebrates.</p> <p>CO 5 - To evaluate animal diversity and initiate their career opportunities.</p> <p>CO 6 - To observe, draw and synthesize information about invertebrates in laboratory and field conditions to enhance research.</p>
218	ALS201	Add on course: Professional English for Life Sciences 1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p> <p>PO 6 - To communicate effectively and collaborate successfully with peers to become competent professionals.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p> <p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology</p>	<p>CO 1 - To recognise the words used in life science and improve their competence in using the language.</p> <p>CO 2 - To comprehend unfamiliar texts and describe biological processes.</p> <p>CO 3 - To apply language for speaking and writing with confidence in an intelligible and acceptable manner.</p> <p>CO 4 - To apply critical and theoretical approaches to the reading and analysis of various texts in life sciences.</p> <p>CO 5 - To analyze critically, negotiate and present without committing errors and develop entrepreneurship skills.</p>
219	ZNM201	NMEC - Public Health and Hygiene	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p> <p>PO 6 - To communicate effectively and collaborate successfully with peers to become competent professionals.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To describe personal health with respect to skin, hair, eye, ear and teeth.</p> <p>CO 2 - To explain the concepts of health and nutrition in relation to physical, mental, social and spiritual fitness.</p> <p>CO 3 - To analyse BMI and personal hygiene.</p> <p>CO 4 - To evaluate food quality, housing standards and good sanitation.</p> <p>CO 5 - To apply the knowledge of maternity, child health and Swachh Bharat Mission.</p>

220	ZC2021	Major Core II: Chordate zoology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p> <p>PO 6 - To communicate effectively and collaborate successfully with peers to become competent professionals.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To identify the systematic position and describe the biological significance of chordates.</p> <p>CO 2 - To recognize different chordates based on their salient features.</p> <p>CO 3 - To compare the morphology and anatomy of selected chordates.</p> <p>CO 4 - To assess the structural, physiological, ecological and behavioural adaptations pertaining to their mode of life.</p> <p>CO 5 - To design experiments to relate chordates with their environment.</p> <p>CO 6 - To disseminate knowledge on chordates to excel in research and entrepreneurship initiatives.</p>
221	ZC20P1	Major Practical I Invertebrate Zoology and Chordate Zoology	<input checked="" type="checkbox"/>				<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p> <p>PO 6 - To communicate effectively and collaborate successfully with peers to become competent professionals.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To identify the systematic position of selected invertebrates and chordates through observation of live and preserved specimens.</p> <p>CO 2 - To describe the external morphology and biological significance of invertebrates and chordates.</p> <p>CO 3 - To apply technical and creative skills through teamwork.</p> <p>CO 4 - To analyse the different taxonomic groups based on anatomy and structural arrangements.</p>
222	ALS202	Add on course: Professional English for Life Sciences II	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p> <p>PO 6 - To communicate effectively and collaborate successfully with peers to become competent professionals.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To recognise their own ability to improve their own competence in using the language.</p> <p>CO 2 - To use language for speaking with confidence in an intelligible and acceptable manner.</p> <p>CO 3 - To understand the importance of reading for life.</p> <p>CO 4 - To understand the importance of writing in academic life.</p> <p>CO 5 - To write simple sentences without committing error of spelling or grammar.</p>

223	ZNM202	Non Major Elective: Common Ailments and Simple Remedies	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p> <p>PO 6 - To communicate effectively and collaborate successfully with peers to become competent professionals.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To enumerate the symptoms of common diseases.</p> <p>CO 2 - To summarise common health problems like anaemia, diabetes, skin and dental problems and old age ailments.</p> <p>CO 3 - To apply preventive strategies to develop healthy society.</p> <p>CO 4 - To analyse the problems of changing lifestyle and its impact on human health.</p> <p>CO 5 - To evaluate the simple remedies for common ailments.</p>
224	ZC1731	Major Core III - Cell Biology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 7 - To equip students with hands on training through various courses to enhance entrepreneurship skills.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 2 - To undertake studies in different Zoological disciplines like Biochemistry, Cell Biology, Genetics, Physiology, Developmental Biology, Ecology, Evolution, Immunology, Microbiology, Biostatistics and Computer applications.</p> <p>PSO 3 - To demonstrate practical skills and to interpret results.</p> <p>PSO 8 - To apply the knowledge attained from principles and concepts learned from specific subject areas to create local and global impact.</p>	<p>CO 1 - To identify the cell organelles and discuss their functions.</p> <p>CO 2 - To explain the structural organization of chromosomes and their significance.</p> <p>CO 3 - To describe the structure and functions of nucleic acids.</p> <p>CO 4 - To apply the knowledge of cell biology in cancer and stem cell research.</p> <p>CO 5 - To demonstrate cytological techniques.</p>
225	ZC1732	Major – Elective I (a) Biochemistry and Biophysics	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 7 - To equip students with hands on training through various courses to enhance entrepreneurship skills.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 2 - To undertake studies in different Zoological disciplines like Biochemistry, Cell Biology, Genetics, Physiology, Developmental Biology, Ecology, Evolution, Immunology, Microbiology, Biostatistics and Computer applications.</p> <p>PSO 8 - To apply the knowledge attained from principles and concepts learnt from specific subject areas to create a local and global impact.</p>	<p>CO 1 - To discuss the structure of an atom, molecule and their interactions.</p> <p>CO 2 - To evaluate the importance of buffer system and enzymes.</p> <p>CO 3 - To classify biological macromolecules and describe their structure and significance.</p> <p>CO 4 - To use methods and techniques of physics to study biological processes.</p> <p>CO 5 - To apply basic methods in the fields of biophysics, biochemistry.</p>
226	ZC1733	Major – Elective I (b) Clinical Lab Technology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 7 - To equip students with hands on training through various courses to enhance entrepreneurship skills.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 2 - To undertake studies in different Zoological disciplines like Biochemistry, Cell Biology, Genetics, Physiology, Developmental Biology, Ecology, Evolution, Immunology, Microbiology, Biostatistics and Computer applications.</p> <p>PSO 8 - To apply the knowledge attained from principles and concepts learnt from specific subject areas to create a local and global impact.</p>	<p>CO 1 - To develop skills necessary for higher studies or placement in clinical laboratories.</p> <p>CO 2 - To acquire knowledge about laboratory techniques, maintenance of records and ethics of clinical labs.</p> <p>CO 3 - To perform basic clinical laboratory procedures using appropriate laboratory techniques.</p> <p>CO 4 - To use instruments in accordance with laboratory protocol.</p> <p>CO 5 - To calculate and interpret laboratory results using standard protocol.</p>
227	ZC1734	Major – Elective I (c) Bioinstrumentation	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 7 - To equip students with hands on training through various courses to enhance entrepreneurship skills.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 2 - To undertake studies in different Zoological disciplines like Biochemistry, Cell Biology, Genetics, Physiology, Developmental Biology, Ecology, Evolution, Immunology, Microbiology, Biostatistics and Computer applications.</p> <p>PSO 8 - To apply the knowledge attained from principles and concepts learnt from specific subject areas to create a local and global impact.</p>	<p>CO 1 - To gain basic knowledge on computer and information technology.</p> <p>CO 2 - To describe the contents and properties of the most important bioinformatics databases.</p> <p>CO 3 - To use appropriate programme for sequence analysis and trace phylogeny of an organism.</p> <p>CO 4 - To apply bioinformatics tools for drug designing.</p> <p>CO 5 - To use effective written and verbal communication in the bioinformatics research projects.</p>
228	ZC17P3	Major Practical III Cell Biology and Biochemistry and Biophysics	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To face challenging competitive examinations that offer rewarding careers in science and education.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 3 - To demonstrate practical skills and to interpret results.</p> <p>PSO 8 - To apply the knowledge attained from principles and concepts learned from specific subject areas to create local and global impact.</p>	<p>CO 1 - To apply basic methods in the fields of biophysics, biochemistry.</p> <p>CO 2 - To prepare squash and smear of biological samples and identify the cells.</p> <p>CO 3 - To develop skills in handling analytical instruments.</p> <p>CO 4 - To analyse biochemical constituents qualitatively and quantitatively.</p> <p>CO 5 - To use paper chromatography to separate biomolecules.</p> <p>CO 6 - To understand the structure of biomolecules and the principles of biological processes.</p>

229	ZA1731	Allied Zoology – General Zoology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To face challenging competitive examinations that offer rewarding careers in science and education.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 3 - To demonstrate practical skills and to interpret results.</p> <p>PSO 8 - To apply the knowledge attained from principles and concepts learned from specific subject areas to create local and global impact.</p>	<p>CO 1 - To describe general principles of taxonomy on animal classification.</p> <p>CO 2 - To explain the specific characteristics of invertebrates and vertebrates.</p> <p>CO 3 - To explain the structure of cells, chromosomes and apply the knowledge of genetics in identifying genetic disorders.</p> <p>CO 4 - To explain the development and evolution of animal life.</p> <p>CO 5 - To recognize the major functions of organ systems in human body and the role played by animals in their environment.</p> <p>CO 6 - To apply diverse taxonomic resources for animal identification and simple experimental procedures pertaining to the course.</p>
230	ZC1751	SLC - Ornamental Fish Culture	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 7 - To equip students with hands on training through various courses to enhance entrepreneurship skills.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 5 - To develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture , Sericulture, Apiculture , Poultry, Vermitechnology , Clinical Lab Technology and General Health Care.</p> <p>PSO 9 - To enhance professional empowerment to attain economic independence.</p>	<p>CO 1 - To choose materials necessary for setting an aquarium, accessories, popular ornamental fishes, feed, anesthetics and diseases.</p> <p>CO 2 - To demonstrate the construction of fish tanks, culture techniques and feed preparation</p> <p>CO 3 - To establish and maintain an aquarium for commercialization.</p> <p>CO 4 - To analyse the types of tanks, physico-chemical parameters and feed relevant for ornamental fishes.</p>
231	ZC1741	Major Core IV - Genetics	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To face challenging competitive examinations that offer rewarding careers in science and education.</p> <p>PO 6 - To impart communicative skills and ethical values.</p> <p>PO 7 - To equip students with hands on training through various courses to enhance entrepreneurship skills.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 2 - To undertake studies in different Zoological disciplines like Biochemistry, Cell Biology, Genetics, Physiology, Developmental Biology, Ecology, Evolution, Immunology, Microbiology, Biostatistics and Computer applications.</p> <p>PSO 8 - To apply the knowledge attained from principles and concepts learnt from specific subject areas to create a local and global impact.</p>	<p>CO 1 - To describe the fundamental principles of genetics based on Mendelian concepts.</p> <p>CO 2 - To gain knowledge on chromosome mapping and genetic concepts affecting society.</p> <p>CO 3 - To select and apply experimental procedures to solve genetic problems.</p> <p>CO 4 - To interpret the phenotype, genotype and karyotype and derive conclusions based on genetic data.</p> <p>CO 5 - To evaluate biological factors that influence human heredity.</p> <p>CO 6 - To recognize the experimental rationale of genetic studies and develop skills necessary for advanced study or research.</p>
232	ZC1742	Major – Elective II (a) Biostatistics and Computer Applications	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To face challenging competitive examinations that offer rewarding careers in science and education.</p> <p>PO 6 - To impart communicative skills and ethical values.</p> <p>PO 7 - To equip students with hands on training through various courses to enhance entrepreneurship skills.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 2 - To undertake studies in different Zoological disciplines like Biochemistry, Cell Biology, Genetics, Physiology, Developmental Biology, Ecology, Evolution, Immunology, Microbiology, Biostatistics and Computer applications.</p> <p>PSO 5 - To develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture , Sericulture, Apiculture , Poultry, Vermitechnology , Clinical Lab Technology and General Health Care.</p> <p>PSO 7 - To acquire the professional skills to handle ethical and legal issues and social responsibilities.</p> <p>PSO 8 - To apply the knowledge attained from principles and concepts learnt from specific subject areas to create a local and global impact.</p>	<p>CO 1 - To define terminologies applied in biostatistics.</p> <p>CO 2 - To collect, present and analyse biological data by appropriate statistical methods.</p> <p>CO 3 - To evaluate critically the statistical concepts.</p> <p>CO 4 - To utilize the computer skill for biological data management, analysis and graphical presentation.</p> <p>CO 5 - To develop the skill to apply statistical packages.</p>
233	ZC1743	Major – Elective II (b) Bioinformatics	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To face challenging competitive examinations that offer rewarding careers in science and education.</p> <p>PO 6 - To impart communicative skills and ethical values.</p> <p>PO 7 - To equip students with hands on training through various courses to enhance entrepreneurship skills.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 2 - To undertake studies in different Zoological disciplines like Biochemistry, Cell Biology, Genetics, Physiology, Developmental Biology, Ecology, Evolution, Immunology, Microbiology, Biostatistics and Computer applications.</p> <p>PSO 5 - To develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture , Sericulture, Apiculture , Poultry, Vermitechnology , Clinical Lab Technology and General Health Care.</p> <p>PSO 6 - To plan their career goals and pursue higher studies to meet global challenges.</p> <p>PSO 7 - To acquire the professional skills to handle ethical and legal issues and social responsibilities.</p> <p>PSO 8 - To apply the knowledge attained from principles and concepts learnt from specific subject areas to create a local and global impact.</p>	<p>CO 1 - To gain basic knowledge on computer and information technology.</p> <p>CO 2 - To describe the contents and properties of the most important bioinformatics databases.</p> <p>CO 3 - To use appropriate programme for sequence analysis and trace phylogeny of an organism.</p> <p>CO 4 - To apply bioinformatics tools for drug designing.</p> <p>CO 5 - To use effective written and verbal communication in the bioinformatics research projects.</p>

234	ZC1744	Major – Elective II (c) Apiculture	<input checked="" type="checkbox"/>				<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To face challenging competitive examinations that offer rewarding careers in science and education.</p> <p>PO 6 - To impart communicative skills and ethical values.</p> <p>PO 7 - To equip students with hands on training through various courses to enhance entrepreneurship skills.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 2 - To undertake studies in different Zoological disciplines like Biochemistry, Cell Biology, Genetics, Physiology, Developmental Biology, Ecology, Evolution, Immunology, Microbiology, Biostatistics and Computer applications.</p> <p>PSO 4 - To communicate appropriately and effectively, in a scientific context using current technology.</p> <p>PSO 8 - To apply the knowledge attained from principles and concepts learnt from specific subject areas to create a local and global impact.</p>	<p>CO 1 - To attain knowledge on beekeeping and management.</p> <p>CO 2 - To identify apiary equipments and demonstrate the assembling of apiary.</p> <p>CO 3 - To describe bee biology and anatomy from the perspective of managing bees.</p> <p>CO 4 - To discuss the importance of honey, wax and bee venom.</p> <p>CO 5 - To outline the social behaviors of honey bees and associate apiculture with agriculture.</p>
235	ZC17P4	Major Pactical IV Genetics and Biostatistics and Computer Applications	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To face challenging competitive examinations that offer rewarding careers in science and education.</p> <p>PO 6 - To impart communicative skills and ethical values.</p> <p>PO 7 - To equip students with hands on training through various courses to enhance entrepreneurship skills.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 2 - To undertake studies in different Zoological disciplines like Biochemistry, Cell Biology, Genetics, Physiology, Developmental Biology, Ecology, Evolution, Immunology, Microbiology, Biostatistics and Computer applications.</p> <p>PSO 4 - To communicate appropriately and effectively, in a scientific context using current technology.</p> <p>PSO 8 - To apply the knowledge attained from principles and concepts learnt from specific subject areas to create a local and global impact.</p>	<p>CO 1 - To gain knowledge on chromosome mapping and genetic concepts affecting society.</p> <p>CO 2 - To select and apply experimental procedures to solve genetic problems.</p> <p>CO 3 - To interpret the phenotype, genotype and karyotype and derive conclusions based on genetic data.</p> <p>CO 4 - To evaluate biological factors that influence human heredity.</p> <p>CO 5 - To recognize the experimental rationale of genetic studies and develop skills necessary for advanced study or research.</p>
236	ZA1741	Allied II – Theory: Applied Zoology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To face challenging competitive examinations that offer rewarding careers in science and education.</p> <p>PO 6 - To impart communicative skills and ethical values.</p> <p>PO 7 - To equip students with hands on training through various courses to enhance entrepreneurship skills.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 2 - To undertake studies in different Zoological disciplines like Biochemistry, Cell Biology, Genetics, Physiology, Developmental Biology, Ecology, Evolution, Immunology, Microbiology, Biostatistics and Computer applications.</p> <p>PSO 5 - To develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture , Sericulture, Apiculture , Poultry, Vermitechnology , Clinical Lab Technology and General Health Care.</p> <p>PSO 7 - To acquire the professional skills to handle ethical and legal issues and social responsibilities.</p> <p>PSO 8 - To apply the knowledge attained from principles and concepts learnt from specific subject areas to create a local and global impact.</p>	<p>CO 1 - To describe the various aspects of animal husbandry in economic development.</p> <p>CO 2 - To explain the appliances used in bee keeping and discuss the significance of apiculture.</p> <p>CO 3 - To rear silkworms, identify the disease and cocoon marketing.</p> <p>CO 4 - To gain knowledge for the establishment of poultry and dairy farm</p> <p>CO 5 - To adopt aquaculture practices as a profitable hobby.</p>
237	ZA17P1	Allied Zoology II: Practical General Zoology & Applied Zoology	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<p>PO 1 - To utilize scientific knowledge to pursue higher studies in the relevant field.</p> <p>PO 2 - To create innovative ideas to enhance entrepreneurial skills for economic independence.</p> <p>PO 3 - To face challenging competitive examinations that offer rewarding careers.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To handle ethical issues with social responsibility.</p>	<p>PSO 1 - To gain knowledge on animal diversity and basic concepts of Taxonomy, Cell biology, Genetics, Physiology, Immunology, Microbiology, Biotechnology, Ecology, Evolution, Embryology and Applied Zoology.</p> <p>PSO 2 - To perform experiments as per laboratory standards in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.</p> <p>PSO 3 - To apply the biological method by formulating a hypothesis, gathering relevant data and analyzing the data to address the problem effectively.</p> <p>PSO 4 - To plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.</p>	<p>CO 1 - To identify the different groups of invertebrate animals by observing their external characteristics.</p> <p>CO 2 - To understand the organs, organ system and their functions in lower animals.</p> <p>CO 3 - To get knowledge about the different es of life and their adaptation based on the environment.</p> <p>CO 4 - To dissect and display the internal organs and mount the mouthparts and scales of invertebrates.</p>

238	ZC17S2	SLC- Nutrition and Dietetics	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 6 - To impart communicative skills and ethical values.</p> <p>PO 7 - To equip students with hands on training through various courses to enhance entrepreneurship skills.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 2 - To undertake studies in different Zoological disciplines like Biochemistry, Cell Biology, Genetics, Physiology, Developmental Biology, Ecology, Evolution, Immunology, Microbiology, Biostatistics and Computer applications.</p> <p>PSO 3 - To demonstrate practical skills and to interpret results.</p> <p>PSO 4 - To communicate appropriately and effectively, in a scientific context using current technology.</p> <p>PSO 8 - To apply the knowledge attained from principles and concepts learnt from specific subject areas to create a local and global impact.</p>	<p>CO 1 - To explain the role of essential nutrients their sources and their impact on human health.</p> <p>CO 2 - To describe dietary intake of different age groups.</p> <p>CO 3 - To develop skills to create personalised nutrition plan based on individual needs , age and gender.</p>
239	ZC1751	Major Core V - Animal Physiology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To face challenging competitive examinations that offer rewarding careers in science and education.</p> <p>PO 6 - To impart communicative skills and ethical values.</p> <p>PO 7 - To equip students with hands on training through various courses to enhance entrepreneurship skills.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 2 - To undertake studies in different Zoological disciplines like Biochemistry, Cell Biology, Genetics, Physiology, Developmental Biology, Ecology, Evolution, Immunology, Microbiology, Biostatistics and Computer applications.</p> <p>PSO 4 - To communicate appropriately and effectively, in a scientific context using current technology.</p> <p>PSO 8 - To apply the knowledge attained from principles and concepts learnt from specific subject areas to create a local and global impact.</p>	<p>CO 1 - To understand the basic anatomy of digestive, respiratory, excretory, homeostatic, neuromuscular, endocrine and reproductive system.</p> <p>CO 2 - To describe the functional mechanism of internal regulation by different organ systems.</p> <p>CO 3 - To compare various organ systems and discuss the adaptations exhibited by animals.</p> <p>CO 4 - To analyze the reason for diseases in man and other organisms.</p> <p>CO 5 - To use anatomical knowledge to predict physiological consequences.</p>
240	ZC1752	Major Core VI - Embryology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To face challenging competitive examinations that offer rewarding careers in science and education.</p> <p>PO 6 - To impart communicative skills and ethical values.</p> <p>PO 7 - To equip students with hands on training through various courses to enhance entrepreneurship skills.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 2 - To undertake studies in different Zoological disciplines like Biochemistry, Cell Biology, Genetics, Physiology, Developmental Biology, Ecology, Evolution, Immunology, Microbiology, Biostatistics and Computer applications.</p> <p>PSO 7 - To acquire the professional skills to handle ethical and legal issues and social responsibilities.</p> <p>PSO 9 - To enhance professional empowerment to attain economic independence.</p>	<p>CO 1 - To describe cleavage, morphogenetic movements and gastrulation.</p> <p>CO 2 - To explain gametogenesis, fertilization and parthenogenesis.</p> <p>CO 3 - To describe cleavage, morphogenetic movements and gastrulation.</p> <p>CO 4 - To acquire knowledge on Organizer, gradient system foetal membranes and placentation in mammals.</p> <p>CO 5 - To demonstrate metamorphosis and regeneration.</p> <p>CO 6 - To discuss Nuclear cytoplasmic interaction, assisted reproductive technology and birth control measures.</p>
241	ZC1753	Major Core VII - Ecology and Toxicology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To face challenging competitive examinations that offer rewarding careers in science and education.</p> <p>PO 6 - To impart communicative skills and ethical values.</p> <p>PO 7 - To equip students with hands on training through various courses to enhance entrepreneurship skills.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 2 - To undertake studies in different Zoological disciplines like Biochemistry, Cell Biology, Genetics, Physiology, Developmental Biology, Ecology, Evolution, Immunology, Microbiology, Biostatistics and Computer applications.</p> <p>PSO 7 - To acquire the professional skills to handle ethical and legal issues and social responsibilities.</p> <p>PSO 8 - To apply the knowledge attained from principles and concepts learnt from specific subject areas to create a local and global impact.</p>	<p>CO 1 - To explain gametogenesis, fertilization and parthenogenesis.</p> <p>CO 2 - To describe cleavage, morphogenetic movements and gastrulation.</p> <p>CO 3 - To acquire knowledge on Organizer, gradient system foetal membranes and placentation in mammals.</p> <p>CO 4 - To demonstrate metamorphosis and regeneration.</p> <p>CO 5 - To discuss Nuclear cytoplasmic interaction, assisted reproductive technology and birth control measures.</p>
242	ZC1754	Major – Elective III (a) Aquaculture	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p>PO 1 - To acquire interdisciplinary knowledge and the skill of designing and conducting experiments and interpreting scientific data.</p> <p>PO 2 - To communicate effectively, analyze critically and learn to adapt with respect to the socio-technological changes.</p> <p>PO 3 - To pursue higher studies in the relevant field, gain entrepreneurship skills and enhance employability.</p> <p>PO 5 - To face challenging competitive examinations that offer rewarding careers in science and education.</p> <p>PO 6 - To impart communicative skills and ethical values.</p> <p>PO 7 - To equip students with hands on training through various courses to enhance entrepreneurship skills.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 5 - To develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology, Clinical Lab Technology and General Health Care.</p> <p>PSO 9 - To enhance professional empowerment to attain economic independence.</p>	<p>CO 1 - To explain the construction of aquatic ponds and water quality management.</p> <p>CO 2 - To culture finfish and shellfish and live feed organisms.</p> <p>CO 3 - To demonstrate different culture methods.</p> <p>CO 4 - To gain knowledge on artificial feed preparation, diseases and their control measures.</p> <p>CO 5 - To describe capture techniques, fish preservation and marketing</p> <p>CO 6 - To establish aquarium as a profitable hobby.</p>

243	ZC1755	Major – Elective III (b) Sericulture	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To face challenging competitive examinations that offer rewarding careers in science and education.</p> <p>PO 6 - To impart communicative skills and ethical values.</p> <p>PO 7 - To equip students with hands on training through various courses to enhance entrepreneurship skills.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 2 - To undertake studies in different Zoological disciplines like Biochemistry, Cell Biology, Genetics, Physiology, Developmental Biology, Ecology, Evolution, Immunology, Microbiology, Biostatistics and Computer applications.</p> <p>PSO 7 - To acquire the professional skills to handle ethical and legal issues and social responsibilities.</p> <p>PSO 8 - To apply the knowledge attained from principles and concepts learnt from specific subject areas to create a local and global impact.</p> <p>PSO 9 - To enhance professional empowerment to attain economic independence.</p>	<p>CO 1 - To explain the cultivation and maintenance of mulberry plantation.</p> <p>CO 2 - To identify the diseases and pests of mulberry plant and silk worm.</p> <p>CO 3 - To rear silkworms and gain knowledge on silk reeling.</p> <p>CO 4 - To evaluate the quality of cocoon and marketing.</p> <p>CO 5 - To acquire skills necessary for self-employment in sericulture.</p>
244	ZC1756	Major – Elective III (c) Marine Biology	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 2 - To create innovative ideas through laboratory experiments.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 7 - To equip students with hands on training through various courses to enhance entrepreneurship skills.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 2 - To undertake studies in different Zoological disciplines like Biochemistry, Cell Biology, Genetics, Physiology, Developmental Biology, Ecology, Evolution, Immunology, Microbiology, Biostatistics and Computer applications.</p> <p>PSO 7 - To acquire the professional skills to handle ethical and legal issues and social responsibilities.</p> <p>PSO 8 - To apply the knowledge attained from principles and concepts learnt from specific subject areas to create a local and global impact.</p>	<p>CO 1 - To explain the influence of physico-chemical factors on marine organisms.</p> <p>CO 2 - To identify the impact of waves and tides on animal and plant population.</p> <p>CO 3 - To discuss the energy flow in the marine environment.</p> <p>CO 4 - To evaluate the economic importance of marine resources and the impact of pollutants.</p> <p>CO 5 - To use scientific technology to assess quantitative parameters in relation to distribution of marine biota.</p>
245	ZC17P5	Major Practical V Physiology and Developmental Zoology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To face challenging competitive examinations that offer rewarding careers in science and education.</p> <p>PO 6 - To impart communicative skills and ethical values.</p> <p>PO 7 - To equip students with hands on training through various courses to enhance entrepreneurship skills.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 2 - To undertake studies in different Zoological disciplines like Biochemistry, Cell Biology, Genetics, Physiology, Developmental Biology, Ecology, Evolution, Immunology, Microbiology, Biostatistics and Computer applications.</p> <p>PSO 7 - To acquire the professional skills to handle ethical and legal issues and social responsibilities.</p> <p>PSO 8 - To apply the knowledge attained from principles and concepts learnt from specific subject areas to create a local and global impact.</p>	<p>CO 1 - To explain the effect of abiotic factors on physiological process.</p> <p>CO 2 - To analyse major nutrients qualitatively and describe the principles of analytical instruments and its uses in physiology.</p> <p>CO 3 - To perform scientific mode of thinking; planning experiments, analyzing and evaluating data skills as scientific laboratory reports.</p> <p>CO 4 - To develop methodological approach to embryonic development.</p> <p>CO 5 - To identify instruments, tissues, embryonic structures in preparations, photographs and diagrams.</p>
246	ZSK175	SBC- Vermitechnology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 7 - To equip students with hands on training through various courses to enhance entrepreneurship skills.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 2 - To undertake studies in different Zoological disciplines like Biochemistry, Cell Biology, Genetics, Physiology, Developmental Biology, Ecology, Evolution, Immunology, Microbiology, Biostatistics and Computer applications.</p> <p>PSO 4 - To communicate appropriately and effectively, in a scientific context using current technology.</p> <p>PSO 7 - To acquire the professional skills to handle ethical and legal issues and social responsibilities.</p>	<p>CO 1 - To discuss the classification and categories of earthworms.</p> <p>CO 2 - To explain the biology of earthworms.</p> <p>CO 3 - To assess the importance of earthworms in soil fertility, medicine and pharmaceuticals.</p> <p>CO 4 - To design the methodology for vermiculture and for the production of vermicompost and vermiwash.</p> <p>CO 5 - To prepare and market the vermicompost.</p>
247	ZC1761	Major Core VIII - Biotechnology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To face challenging competitive examinations that offer rewarding careers in science and education.</p> <p>PO 6 - To impart communicative skills and ethical values.</p> <p>PO 7 - To equip students with hands on training through various courses to enhance entrepreneurship skills.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 2 - To undertake studies in different Zoological disciplines like Biochemistry, Cell Biology, Genetics, Physiology, Developmental Biology, Ecology, Evolution, Immunology, Microbiology, Biostatistics and Computer applications.</p> <p>PSO 4 - To communicate appropriately and effectively, in a scientific context using current technology.</p> <p>PSO 7 - To acquire the professional skills to handle ethical and legal issues and social responsibilities.</p>	<p>CO 1 - To acquire knowledge of basic concepts of biotechnology and central dogma.</p> <p>CO 2 - To discuss the rDNA technology, DNA library, hybridoma technology, animal cell and tissue culture and gene therapy.</p> <p>CO 3 - To decide and apply appropriate tools and techniques in biotechnological manipulation.</p> <p>CO 4 - To explain the general principles of generating transgenic plants, animals and application of microbes pharmaceutical products.</p> <p>CO 5 - To undertake any responsibility as an individual and as a team in a multidisciplinary environment for landing in a job.</p>

248	ZC1762	Major Core IX - Immunology and microbiology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 2 - To create innovative ideas through laboratory experiments.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To face challenging competitive examinations that offer rewarding careers in science and education.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 2 - To undertake studies in different Zoological disciplines like Biochemistry, Cell Biology, Genetics, Physiology, Developmental Biology, Ecology, Evolution, Immunology, Microbiology, Biostatistics and Computer applications.</p> <p>PSO 7 - To acquire the professional skills to handle ethical and legal issues and social responsibilities.</p> <p>PSO 8 - To apply the knowledge attained from principles and concepts learnt from specific subject areas to create a local and global impact.</p>	<p>CO 1 - To identify the major components of the immune system at organ and cellular level.</p> <p>CO 2 - To discuss the types of immune response and mechanisms to eliminate antigens.</p> <p>CO 3 - To culture and identify the microorganisms based on morphological and staining techniques.</p> <p>CO 4 - To design analytical and experimental tasks involving microbiology and immunology.</p>
249	ZC1763	Major Core X - Evolutionary Biology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 2 - To create innovative ideas through laboratory experiments.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To face challenging competitive examinations that offer rewarding careers in science and education.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 2 - To undertake studies in different Zoological disciplines like Biochemistry, Cell Biology, Genetics, Physiology, Developmental Biology, Ecology, Evolution, Immunology, Microbiology, Biostatistics and Computer applications.</p> <p>PSO 6 - To plan their career goals and pursue higher studies to meet global challenges.</p>	<p>CO 1 - To explain the concepts of evolution, origin of life, geological time scale and evidences of evolution.</p> <p>CO 2 - To explain the theories of evolution, mechanism of speciation and extinction of organism.</p> <p>CO 3 - To apply Hardy-Weinberg equilibrium in population genetics.</p> <p>CO 4 - To outline the major transitions in evolution, from the origin of life to hominid evolution.</p> <p>CO 5 - To perform, analyse and report experimental observations in evolutionary biology.</p>
250	ZC1764	Major Elective IV - (a) Applied Zoology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 2 - To create innovative ideas through laboratory experiments.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To face challenging competitive examinations that offer rewarding careers in science and education.</p> <p>PO 6 - To impart communicative skills and ethical values.</p> <p>PO 7 - To equip students with hands on training through various courses to enhance entrepreneurship skills.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 2 - To undertake studies in different Zoological disciplines like Biochemistry, Cell Biology, Genetics, Physiology, Developmental Biology, Ecology, Evolution, Immunology, Microbiology, Biostatistics and Computer applications.</p> <p>PSO 4 - To communicate appropriately and effectively, in a scientific context using current technology.</p> <p>PSO 5 - To develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology, Clinical Lab Technology and General Health Care.</p> <p>PSO 7 - To acquire the professional skills to handle ethical and legal issues and social responsibilities.</p> <p>PSO 9 - To enhance professional empowerment to attain economic independence</p>	<p>CO 1 - To apply the knowledge of animal husbandry in economic development.</p> <p>CO 2 - To identify the kinds of bees and the methods of bee keeping.</p> <p>CO 3 - To rear silkworms, harvest and market the cocoons.</p> <p>CO 4 - To apply skills and experience about the management of poultry and Dairy farming.</p> <p>CO 5 - To culture of economically important finfish and shell fishes.</p>
251	ZC1765	Major Elective IV - (b) Poultry Science	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 2 - To create innovative ideas through laboratory experiments.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To face challenging competitive examinations that offer rewarding careers in science and education.</p> <p>PO 6 - To impart communicative skills and ethical values.</p> <p>PO 7 - To equip students with hands on training through various courses to enhance entrepreneurship skills.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 2 - To undertake studies in different Zoological disciplines like Biochemistry, Cell Biology, Genetics, Physiology, Developmental Biology, Ecology, Evolution, Immunology, Microbiology, Biostatistics and Computer applications.</p> <p>PSO 5 - To develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology, Clinical Lab Technology and General Health Care.</p> <p>PSO 7 - To acquire the professional skills to handle ethical and legal issues and social responsibilities.</p> <p>PSO 9 - To enhance professional empowerment to attain economic independence.</p>	<p>CO 1 - To explain different aspects of raising poultry for meat and eggs.</p> <p>CO 2 - To construct and maintain poultry house and management of poultry animals.</p> <p>CO 3 - To identify the diseases and implement control measures.</p> <p>CO 4 - To develop entrepreneurship skills and commercialize indigenous poultry farming.</p> <p>CO 5 - To provide consultancy service to the local community.</p>

252	ZC1766	Major Elective IV - (c) Pest Management	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 2 - To create innovative ideas through laboratory experiments.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To face challenging competitive examinations that offer rewarding careers in science and education.</p> <p>PO 6 - To impart communicative skills and ethical values.</p> <p>PO 7 - To equip students with hands on training through various courses to enhance entrepreneurship skills.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 2 - To undertake studies in different Zoological disciplines like Biochemistry, Cell Biology, Genetics, Physiology, Developmental Biology, Ecology, Evolution, Immunology, Microbiology, Biostatistics and Computer applications.</p> <p>PSO 5 - To develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology, Clinical Lab Technology and General Health Care.</p> <p>PSO 7 - To acquire the professional skills to handle ethical and legal issues and social responsibilities.</p> <p>PSO 9 - To enhance professional empowerment to attain economic independence.</p>	<p>CO 1 - To outline the pest groups affecting different agricultural crops and control measures.</p> <p>CO 2 - To evaluate the control measures adopted for pests of household and stored products.</p> <p>CO 3 - To select correct IPM in cropping systems with traditional and alternative control measures.</p> <p>CO 4 - To analyze the impact of pesticides on environment and adopt better agricultural practices.</p> <p>CO 5 - To pursue advanced programme in entomology and seek employment opportunities.</p>
253	ZC17P6	Practical VI Ecology and Toxicology and Evolutionary Biology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 2 - To create innovative ideas through laboratory experiments.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 3 - To demonstrate practical skills and to interpret results.</p> <p>PSO 4 - To communicate appropriately and effectively, in a scientific context using current technology.</p> <p>PSO 7 - To acquire the professional skills to handle ethical and legal issues and social responsibilities.</p>	<p>CO 1 - To analyse the quality of water samples.</p> <p>CO 2 - To examine and identify the zooplanktons.</p> <p>CO 3 - To assess the evolutionary concepts through experiments.</p> <p>CO 4 - To study the natural ecosystem and report.</p>
254	ZC17P7	Practical VII Biotechnology and Immunology and Microbiology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 2 - To create innovative ideas through laboratory experiments.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 3 - To demonstrate practical skills and to interpret results.</p> <p>PSO 4 - To communicate appropriately and effectively, in a scientific context using current technology.</p> <p>PSO 7 - To acquire the professional skills to handle ethical and legal issues and social responsibilities.</p>	<p>CO 1 - To isolate genomic DNA.</p> <p>CO 2 - To perform quantitative, immunological and microbiological analysis.</p> <p>CO 3 - To differentiate Gram positive and negative bacteria.</p> <p>CO 4 - To identify lymphoid organs in a vertebrate model.</p> <p>CO 5 - To develop skills needed for future research in immunology, microbiology and biotechnology.</p>
255	ZSK176	SBC Project	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 2 - To create innovative ideas through laboratory experiments.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 6 - To impart communicative skills and ethical values.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 2 - To undertake studies in different Zoological disciplines like Biochemistry, Cell Biology, Genetics, Physiology, Developmental Biology, Ecology, Evolution, Immunology, Microbiology, Biostatistics and Computer applications.</p> <p>PSO 3 - To demonstrate practical skills and to interpret results.</p> <p>PSO 4 - To communicate appropriately and effectively, in a scientific context using current technology.</p>	<p>CO 1 - To formulate research questions, design research methodologies, and implement data collection and analysis techniques appropriate to their field of study.</p> <p>CO 2 - To evaluate existing literature, identify gaps in knowledge, and develop innovative solutions to complex problems.</p> <p>CO 3 - To communicate research findings clearly and concisely through written reports, oral presentations, and visual aids, tailored to diverse audiences.</p> <p>CO 4 - To apply ethical standards in research, including issues related to plagiarism, data integrity, and the responsible use of human and animal subjects.</p> <p>CO 5 - To experience in both collaborative and independent research environments, developing teamwork skills and the ability to manage and complete projects autonomously.</p>
256	PZ2011	Core I: Biochemistry	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To define structure and types of chemical bonds in biomolecules such as hydrogen ions, water, protein, carbohydrate, lipid, nucleotides, enzymes and vitamins.</p> <p>CO 2 - To explain the fate of biomolecules in different metabolic pathways.</p> <p>CO 3 - To apply cognitive, technical and creative skills to pursue higher studies and employability in industrial, biomedical and research laboratories.</p> <p>CO 4 - To analyse biomolecules in biological systems and relate deficiency disorders.</p> <p>CO 5 - To design biochemical experiments and publish the results through effective written and oral communication after drawing accurate conclusions.</p>
257	PZ2012	Core II: Ecobiology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To explain the interaction of organisms with the physical and biological environment.</p> <p>CO 2 - To compare the differences in the structure and function of different types of ecosystems.</p> <p>CO 3 - To assess the human population increase with respect to anthropological activities and environmental impact.</p> <p>CO 4 - To formulate hypotheses and test them by designing appropriate experiments, analyze, interpret data and report.</p>

258	PZ2013	Core III: Structure and Function of Invertebrates	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain the various aspects of life sciences including Biochemistry, Cell and Molecular Biology, Genetics, Physiology, Developmental Biology, Ecobiology, Immunology, microbiology, Endocrinology, Evolution, Biotechnology and Nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills such as group work, presentation and report writing.</p> <p>PSO 4 - To develop competence in the design and execution of research.</p>	<p>CO 1 - To recognise the organisation of coelom, mode of locomotion, nutrition, respiration, excretion and significance of larval forms of invertebrates.</p> <p>CO 2 - To comprehend the systematic position and physiological functions of vital systems in invertebrates.</p> <p>CO 3 - To apply the cognitive skills to pursue higher studies and employability relevant fields.</p> <p>CO 4 - To explore the structure and functions of vertebrates.</p>	
259	PZ2014	Core IV: Comparative Anatomy of Chordates	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To identify the morphology and anatomy of major groups of vertebrates.</p> <p>CO 2 - To interrelate the development of integuments, circulatory system, respiratory system, skeletal system, sense organs and nervous system.</p> <p>CO 3 - To apply the cognitive skills to pursue higher studies and gain employability in academic and research institutions.</p> <p>CO 4 - To analyse the anatomy of different groups of vertebrates.</p>	
260	PZ2015	Elective I: (a) Animal Husbandry	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To acquire knowledge on Livestock resources, construction and management of Livestock farms.</p> <p>CO 2 - To identify the breeds and stages of livestock.</p> <p>CO 3 - To analyse the ethical laws formulated by the Animal Welfare Board.</p> <p>CO 4 - To develop entrepreneurial skills and gain employability in animal farms and research laboratories.</p>	
261	PZ2016	Elective I: (a) Health Care	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To spell quality life and factors that determine health.</p> <p>CO 2 - To outline the concept of health and well-being, personal health care, maternal and child health, environmental and mental health, alternative medicine and first aid.</p> <p>CO 3 - To make use of the different aspects of health and well-being in day to day life.</p> <p>CO 4 - To examine personal health problems and its remedies.</p>	
262	PZ2021	Core V: Biostatistics, Computer Applications and Bioinformatics	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To choose appropriate sampling scheme and interpret biological data.</p> <p>CO 2 - To formulate hypothesis and test the significance.</p> <p>CO 3 - To apply the computer skills for biological data management and presentation.</p> <p>CO 4 - To use database similarity search and retrieval tools in sequence analysis.</p> <p>CO 5 - To develop skills in submitting molecular data to scientific community.</p>

263	PZ2022	Core VI: Cell and Molecular Biology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To recognize and describe the structural and functional organization of cell organelles.</p> <p>CO 2 - To illustrate DNA replication and trace the flow of genetic information from dna to protein, protein sorting and trafficking.</p> <p>CO 3 - To summarise the cell cycle and proteins involved in the regulation and molecular defects leading to cancer.</p> <p>CO 4 - To apply the principles and techniques of molecular biology for further education and employment.</p>
264	PZ2023	Core VII: Developmental Biology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To discuss basic concepts and developmental processes of different organ systems and techniques in reproductive biology.</p> <p>CO 2 - To distinguish the embryonic structures, origin and development of organ systems.</p> <p>CO 3 - To analyse the regulating mechanisms of developmental processes and identify deformities.</p> <p>CO 4 - To apply knowledge to pursue higher studies and gain employability in biological research laboratories.</p>
265	PZ2024	Core VII: Research Methodology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To demonstrate a broad range of research methodologies and their relevance to specific research problems.</p> <p>CO 2 - To operate instruments like microscope, centrifuge, pH meter and spectrometer and perform experiments on histology, chromatography and electrophoretic techniques.</p> <p>CO 3 - To use scientific methods to develop hypotheses, design and execute experiments by selecting the appropriate research techniques.</p> <p>CO 4 - To conceptualize research processes, data presentation, report writing and publication in journals.</p>
266	PZ2025	Elective II: (a) Animal Behaviour and Chronobiology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To describe animal behaviour, reflexes, biological rhythms and Chronobiology.</p> <p>CO 2 - To summarize the history of ethology, social behaviour in animals, organization of circadian system in multicellular animals.</p> <p>CO 3 - To illustrate the developing compassion towards animals, group selection, altruism, predict biological clock system, circadian pacemaker system in vertebrates.</p> <p>CO 4 - To analyse the patterns of animal behaviour and complexity of biological clock system in vertebrates.</p> <p>CO 5 - To assess the relevance of biological clocks for human welfare and taking decisions.</p>
267	PZ2026	Elective II: (b) Bioinformatics	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To describe the basics of bioinformatics.</p> <p>CO 2 - To choose bioinformatics tools and data bases.</p> <p>CO 3 - To interpret sequence alignment and alignment programs.</p> <p>CO 4 - To identify the tools for drug discovery, docking and molecular phylogeny.</p> <p>CO 5 - To use bioinformatics tools for molecular data analysis and submission.</p>

268	PZ20P1	Practical I Biochemistry and Ecology	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To describe the knowledge necessary for professional or academic work in the field of biochemistry and ecology.</p> <p>CO 2 - To analyse the biomolecules and physico-chemical parameters in samples.</p> <p>CO 3 - To develop drawing and writing skills and design experiments.</p> <p>CO 4 - To estimate the components of an ecosystem.</p>
269	PZ20P2	Practical II Biostatistics, Computer Applications and Bioinformatics and Cell and Molecular Biology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To carry out internship programmes and research projects to develop scientific skills and innovative ideas.</p> <p>PO 2 - To analyze complex problems, think independently, formulate and perform quality research.</p> <p>PO 3 - To develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.</p> <p>PO 4 - To emerge as expressive, ethical and responsive citizens with proven expertise.</p> <p>PO 5 - To utilize the obtained scientific knowledge to create eco- friendly environment.</p>	<p>PSO 1 - To explain various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills and entrepreneurial skills.</p> <p>PSO 4 - To independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.</p>	<p>CO 1 - To demonstrate a broad range of research methodologies and their relevance to specific research problems.</p> <p>CO 2 - To operate instruments like microscope, centrifuge, pH meter and spectrometer and perform experiments on histology, chromatography and electrophoretic techniques.</p> <p>CO 3 - To use scientific methods to develop hypotheses, design and execute experiments by selecting the appropriate research techniques.</p> <p>CO 4 - To conceptualize research processes, data presentation, report writing and publication in journals.</p>
270	PZ1731	Core VII - Physiology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To recognize the scientific facts behind natural phenomena.</p> <p>PO 2 - To relate the theory and practical knowledge to solve the problems of the society.</p> <p>PO 3 - To prepare successful professionals in industry, government, academia, research, entrepreneurial pursuits and consulting firms.</p> <p>PO 4 - To face and succeed in high level competitive examinations like NET, GATE and TOFEL.</p> <p>PO 5 - To carry out internship programme and research projects to develop scientific skills and innovative ideas.</p> <p>PO 6 - To utilize the obtained scientific knowledge to create eco-friendly environment.</p> <p>PO 7 - To prepare expressive, ethical and responsible citizens with proven expertise.</p>	<p>PSO 1 - To acquire knowledge on the various aspects of life sciences including Biochemistry, Cell and Molecular Biology, Genetics, Physiology, Developmental Biology, Ecobiology, Immunology, Microbiology, Endocrinology, Evolution, Biotechnology and Nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills such as group work, presentation and report writing.</p> <p>PSO 4 - To develop competence in the design and execution of research.</p> <p>PSO 5 - To independently assemble facts, summarize and draw conclusions from scientific text.</p>	<p>CO 1 - To describe the anatomy of different physiological systems at the tissue and cellular levels.</p> <p>CO 2 - To evaluate the physiological functioning of different organs.</p> <p>CO 3 - To analyze the physiological changes in relation to environmental conditions.</p> <p>CO 4 - To identify different tissues related to anatomy and physiology from an evidence-based perspective.</p> <p>CO 5 - To carry out physiological studies in the laboratory, interpret data and graphs and write a report.</p>
271	PZ1732	Core VIII - Immunology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To recognize the scientific facts behind natural phenomena.</p> <p>PO 2 - To relate the theory and practical knowledge to solve the problems of the society.</p> <p>PO 4 - To face and succeed in high level competitive examinations like NET, GATE and TOFEL.</p> <p>PO 7 - To prepare expressive, ethical and responsible citizens with proven expertise.</p>	<p>PSO 1 - To acquire knowledge on the various aspects of life sciences including Biochemistry, Cell and Molecular Biology, Genetics, Physiology, Developmental Biology, Ecobiology, Immunology, Microbiology, Endocrinology, Evolution, Biotechnology and Nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills such as group work, presentation and report writing.</p> <p>PSO 4 - To develop competence in the design and execution of research.</p> <p>PSO 5 - To independently assemble facts, summarize and draw conclusions from scientific text.</p>	<p>CO 1 - To explain the importance of innate immune response in providing adaptive immunity.</p> <p>CO 2 - To know the evolution of immune molecules in different groups of animals.</p> <p>CO 3 - To differentiate the types of hypersensitive allergic reactions by seeing the symptoms and duration and suggest the remedies.</p> <p>CO 4 - To discuss the role of immune molecules in different diseases and organ transplantation.</p> <p>CO 5 - To demonstrate detailed knowledge and understanding of immunology and the way it is applied in diagnostic and therapeutic techniques and research.</p>
272	PZ1733	Elective III - (a) General Endocrinology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To recognize the scientific facts behind natural phenomena.</p> <p>PO 4 - To face and succeed in high level competitive examinations like NET, GATE and TOFEL.</p> <p>PO 7 - To prepare expressive, ethical and responsible citizens with proven expertise.</p>	<p>PSO 1 - To acquire knowledge on the various aspects of life sciences including Biochemistry, Cell and Molecular Biology, Genetics, Physiology, Developmental Biology, Ecobiology, Immunology, Microbiology, Endocrinology, Evolution, Biotechnology and Nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills such as group work, presentation and report writing.</p> <p>PSO 5 - To independently assemble facts, summarize and draw conclusions from scientific text.</p>	<p>CO 1 - To discuss the principles of endocrine system, hormonal communication and neuroendocrine mechanism in animals.</p> <p>CO 2 - To explain the secretion and transportation of hormones to maintain homeostasis.</p> <p>CO 3 - To apply the knowledge of endocrinology to understand hormone-related disorders.</p> <p>CO 4 - To explain women related physiological processes such as menstruation, gestation and lactation.</p> <p>CO 5 - To correlate endocrine regulation of reproduction and metamorphosis in various invertebrates and vertebrates.</p>

273	PZ1734	Elective III - (b) Health Care	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>PO 1 - To recognize the scientific facts behind natural phenomena.</p> <p>PO 2 - To relate the theory and practical knowledge to solve the problems of the society.</p> <p>PO 3 - To prepare successful professionals in industry, government, academia, research, entrepreneurial pursuits and consulting firms.</p> <p>PO 5 - To carry out internship programme and research projects to develop scientific skills and innovative ideas.</p> <p>PO 6 - To utilize the obtained scientific knowledge to create eco-friendly environment.</p>	<p>PSO 1 - To acquire knowledge on the various aspects of life sciences including Biochemistry, Cell and Molecular Biology, Genetics, Physiology, Developmental Biology, Ecobiology, Immunology, Microbiology, Endocrinology, Evolution, Biotechnology and Nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills such as group work, presentation and report writing.</p> <p>PSO 4 - To develop competence in the design and execution of research.</p> <p>PSO 5 - To independently assemble facts, summarize and draw conclusions from scientific text.</p>	<p>CO 1 - To realize quality life and factors that determine health.</p> <p>CO 2 - To identify personal health problems and its remedies.</p> <p>CO 3 - To gain knowledge on motherhood and childcare.</p> <p>CO 4 - To describe mental and environmental health hazards.</p> <p>CO 5 - To discuss alternative medicines and apply safety and first aid measures.</p>
274	PZ17P3	Practical III Physiology and Genetics and Evolution	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To recognize the scientific facts behind natural phenomena.</p> <p>PO 2 - To relate the theory and practical knowledge to solve the problems of the society.</p> <p>PO 5 - To carry out internship programme and research projects to develop scientific skills and innovative ideas.</p>	<p>PSO 1 - To acquire knowledge on the various aspects of life sciences including Biochemistry, Cell and Molecular Biology, Genetics, Physiology, Developmental Biology, Ecobiology, Immunology, Microbiology, Endocrinology, Evolution, Biotechnology and Nanobiology.</p> <p>PSO 3 - To develop personal and key transferable skills such as group work, presentation and report writing.</p> <p>PSO 4 - To develop competence in the design and execution of research.</p> <p>PSO 5 - To independently assemble facts, summarize and draw conclusions from scientific text.</p>	<p>CO 1 - To gain knowledge on the functioning of organ and organ systems.</p> <p>CO 2 - To demonstrate the effect of abiotic factors on the physiology of the systems through experiments.</p> <p>CO 3 - To identify the immune cells in a blood smear.</p> <p>CO 4 - To demonstrate immune-techniques on antigen-antibody interaction.</p>
275	PZ17S1	SLC- Life Science for Competitive Examinations I	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>PO 1 - To recognize the scientific facts behind natural phenomena.</p> <p>PO 2 - To relate the theory and practical knowledge to solve the problems of the society.</p> <p>PO 3 - To prepare successful professionals in industry, government, academia, research, entrepreneurial pursuits and consulting firms.</p>	<p>PSO 1 - To acquire knowledge on the various aspects of life sciences including Biochemistry, Cell and Molecular Biology, Genetics, Physiology, Developmental Biology, Ecobiology, Immunology, Microbiology, Endocrinology, Evolution, Biotechnology and Nanobiology.</p> <p>PSO 3 - To develop personal and key transferable skills such as group work, presentation and report writing.</p> <p>PSO 4 - To develop competence in the design and execution of research.</p> <p>PSO 5 - To independently assemble facts, summarize and draw conclusions from scientific text.</p>	<p>CO 1 - To explain advanced biological concepts, including molecular biology, genetics, ecology, and physiology, essential for competitive examinations.</p> <p>CO 2 - To develop critical thinking and problem-solving skills, enabling them to analyze scientific data, interpret experimental results, and draw logical.</p> <p>CO 3 - To apply exam techniques and strategies, including time management, question interpretation, and effective answer presentation, to enhance their performance in competitive examinations.</p> <p>CO 4 - To integrate interdisciplinary knowledge from related scientific fields, such as chemistry and physics, to provide holistic answers and approaches to life science questions in competitive exams.</p>
276	PZ17PR	Project	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To recognize the scientific facts behind natural phenomena.</p> <p>PO 2 - To relate the theory and practical knowledge to solve the problems of the society.</p> <p>PO 3 - To prepare successful professionals in industry, government, academia, research, entrepreneurial pursuits and consulting firms.</p> <p>PO 5 - To carry out internship programme and research projects to develop scientific skills and innovative ideas.</p> <p>PO 6 - To utilize the obtained scientific knowledge to create eco-friendly environment.</p>	<p>PSO 1 - To acquire knowledge on the various aspects of life sciences including Biochemistry, Cell and Molecular Biology, Genetics, Physiology, Developmental Biology, Ecobiology, Immunology, Microbiology, Endocrinology, Evolution, Biotechnology and Nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills such as group work, presentation and report writing.</p> <p>PSO 4 - To develop competence in the design and execution of research.</p> <p>PSO 5 - To independently assemble facts, summarize and draw conclusions from scientific text.</p>	<p>CO 1 - To demonstrate a broad range of research methodologies and their relevance to specific research problems.</p> <p>CO 2 - To operate instruments like microscope, centrifuge, pH meter and spectrometer and perform experiments on histology, chromatography and electrophoretic techniques.</p> <p>CO 3 - To use scientific methods to develop hypotheses, design and execute experiments by selecting the appropriate research techniques.</p> <p>CO 4 - To conceptualize research processes, data presentation, report writing and publication in journals.</p>
277	PZ1741	Core IX - Microbiology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To recognize the scientific facts behind natural phenomena.</p> <p>PO 2 - To relate the theory and practical knowledge to solve the problems of the society.</p> <p>PO 3 - To prepare successful professionals in industry, government, academia, research, entrepreneurial pursuits and consulting firms.</p> <p>PO 4 - To face and succeed in high level competitive examinations like NET, GATE and TOFEL.</p> <p>PO 5 - To carry out internship programme and research projects to develop scientific skills and innovative ideas.</p> <p>PO 6 - To utilize the obtained scientific knowledge to create eco-friendly environment.</p> <p>PO 7 - To prepare expressive, ethical and responsible citizens with proven expertise.</p>	<p>PSO 1 - To acquire knowledge on the various aspects of life sciences including Biochemistry, Cell and Molecular Biology, Genetics, Physiology, Developmental Biology, Ecobiology, Immunology, Microbiology, Endocrinology, Evolution, Biotechnology and Nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills such as group work, presentation and report writing.</p> <p>PSO 4 - To develop competence in the design and execution of research.</p> <p>PSO 5 - To independently assemble facts, summarize and draw conclusions from scientific text.</p>	<p>CO 1 - To explain the structure, distribution, classification and life cycle of microorganisms.</p> <p>CO 2 - To culture microbes by selecting appropriate culture media.</p> <p>CO 3 - To explain the role of microbes in food industries and environmental cleaning.</p> <p>CO 4 - To identify the microbial pathogen and preventive measures.</p> <p>CO 5 - To develop microbiological laboratory skills applicable to clinical research.</p>

278	PZ1742	Core X - Ecobiology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To recognize the scientific facts behind natural phenomena.</p> <p>PO 2 - To relate the theory and practical knowledge to solve the problems of the society.</p> <p>PO 3 - To prepare successful professionals in industry, government, academia, research, entrepreneurial pursuits and consulting firms.</p> <p>PO 4 - To face and succeed in high level competitive examinations like NET, GATE and TOFEL.</p> <p>PO 5 - To carry out internship programme and research projects to develop scientific skills and innovative ideas.</p> <p>PO 6 - To utilize the obtained scientific knowledge to create eco-friendly environment.</p> <p>PO 7 - To prepare expressive, ethical and responsible citizens with proven expertise.</p>	<p>PSO 1 - To acquire knowledge on the various aspects of life sciences including Biochemistry, Cell and Molecular Biology, Genetics, Physiology, Developmental Biology, Ecobiology, Immunology, Microbiology, Endocrinology, Evolution, Biotechnology and Nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills such as group work, presentation and report writing.</p> <p>PSO 4 - To develop competence in the design and execution of research.</p> <p>PSO 5 - To independently assemble facts, summarize and draw conclusions from scientific text.</p>	<p>CO 1 - To explain the interaction of organisms with the physical and biological environment.</p> <p>CO 2 - To compare the differences in the structure and function of different types of ecosystems.</p> <p>CO 3 - To assess the human population increase with respect to anthropological activities and environmental impact.</p> <p>CO 4 - To use scientific knowledge of ecology to evaluate contemporary social and environmental issues.</p> <p>CO 5 - To formulate hypotheses and test them by designing appropriate experiments, analyze, interpret data and report.</p> <p>CO 6 - To participate in environmental protection and conservation.</p>
279	PZ1743	Core XI - Biotechnology and Nanobiology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To recognize the scientific facts behind natural phenomena.</p> <p>PO 2 - To relate the theory and practical knowledge to solve the problems of the society.</p> <p>PO 3 - To prepare successful professionals in industry, government, academia, research, entrepreneurial pursuits and consulting firms.</p> <p>PO 5 - To carry out internship programme and research projects to develop scientific skills and innovative ideas.</p> <p>PO 6 - To utilize the obtained scientific knowledge to create eco-friendly environment.</p> <p>PO 7 - To prepare expressive, ethical and responsible citizens with proven expertise.</p>	<p>PSO 1 - To acquire knowledge on the various aspects of life sciences including Biochemistry, Cell and Molecular Biology, Genetics, Physiology, Developmental Biology, Ecobiology, Immunology, Microbiology, Endocrinology, Evolution, Biotechnology and Nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills such as group work, presentation and report writing.</p> <p>PSO 4 - To develop competence in the design and execution of research.</p> <p>PSO 5 - To independently assemble facts, summarize and draw conclusions from scientific text.</p>	<p>CO 1 - To explain the basic concepts of gene cloning and the importance of DNA sequencing in biotechnological intervention.</p> <p>CO 2 - To demonstrate cell culture techniques and prepare protocol to perform experiments.</p> <p>CO 3 - To identify the progression of biotechnology in different areas like medicine, agriculture, environmental sustainability and forensics.</p> <p>CO 4 - To apply the knowledge of genetically modified organism in bioremediation.</p> <p>CO 5 - To outline the basic concepts of nanotechnology, its applications and threat to the environment.</p> <p>CO 6 - To communicate the concepts of biotechnology and develop research skills.</p>
280	PZ1744	Elective IV - (a) Parasitology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To recognize the scientific facts behind natural phenomena.</p> <p>PO 2 - To relate the theory and practical knowledge to solve the problems of the society</p> <p>PO 3 - To prepare successful professionals in industry, government, academia, research, entrepreneurial pursuits and consulting firms.</p> <p>PO 6 - To utilize the obtained scientific knowledge to create eco-friendly environment.</p>	<p>PSO 1 - To acquire knowledge on the various aspects of life sciences including Biochemistry, Cell and Molecular Biology, Genetics, Physiology, Developmental Biology, Ecobiology, Immunology, Microbiology, Endocrinology, Evolution, Biotechnology and Nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills such as group work, presentation and report writing.</p> <p>PSO 4 - To develop competence in the design and execution of research.</p> <p>PSO 5 - To independently assemble facts, summarize and draw conclusions from scientific text.</p>	<p>CO 1 - To explain the basic biology and lifecycle of parasites including epidemiology, diagnosis and treatment.</p> <p>CO 2 - To recognize morphological characteristics for identification of parasites and their developmental stages.</p> <p>CO 3 - To identify appropriate techniques and develop basic skills for detection of parasites.</p> <p>CO 4 - To critically analyze, interpret and discuss factual information on parasites.</p> <p>CO 5 - To analyze the medical and public health aspects of human parasitic infections.</p> <p>CO 6 - To seek employment in veterinary hospitals, clinical and research laboratories.</p>
281	PZ1745	Elective IV - (b) Medical Entomology	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>PO 1 - To recognize the scientific facts behind natural phenomena.</p> <p>PO 2 - To relate the theory and practical knowledge to solve the problems of the society</p> <p>PO 3 - To prepare successful professionals in industry, government, academia, research, entrepreneurial pursuits and consulting firms.</p> <p>PO 6 - To utilize the obtained scientific knowledge to create eco-friendly environment.</p>	<p>PSO 1 - To acquire knowledge on the various aspects of life sciences including Biochemistry, Cell and Molecular Biology, Genetics, Physiology, Developmental Biology, Ecobiology, Immunology, Microbiology, Endocrinology, Evolution, Biotechnology and Nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills such as group work, presentation and report writing.</p> <p>PSO 4 - To develop competence in the design and execution of research.</p> <p>PSO 5 - To independently assemble facts, summarize and draw conclusions from scientific text.</p>	<p>CO 1 - To identify the medically important arthropods by their general morphology and important characteristics.</p> <p>CO 2 - To describe the biology, ecology and geographical distribution of medically important pests and their role in transmission of diseases.</p> <p>CO 3 - To outline the biology of tropical parasites and vectors and the relationship between parasites and their hosts.</p> <p>CO 4 - To assess the immunological approaches in the control of parasitic infections.</p> <p>CO 5 - To outline the biology of tropical parasites and vectors and the relationship between parasites and their hosts.</p>

282	PZ17P4	Practical IV Microbiology and Biotechnology and Nanobiology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To recognize the scientific facts behind natural phenomena.</p> <p>PO 2 - To relate the theory and practical knowledge to solve the problems of the society</p> <p>PO 3 - To prepare successful professionals in industry, government, academia, research, entrepreneurial pursuits and consulting firms.</p> <p>PO 5 - To carry out internship programme and research projects to develop scientific skills and innovative ideas.</p> <p>PO 6 - To utilize the obtained scientific knowledge to create eco-friendly environment.</p>	<p>PSO 1 - To acquire knowledge on the various aspects of life sciences including Biochemistry, Cell and Molecular Biology, Genetics, Physiology, Developmental Biology, Ecobiology, Immunology, Microbiology, Endocrinology, Evolution, Biotechnology and Nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills such as group work, presentation and report writing.</p> <p>PSO 4 - To develop competence in the design and execution of research.</p> <p>PSO 5 - To independently assemble facts, summarize and draw conclusions from scientific text.</p>	<p>CO 1 - To isolate, culture, stain and identify bacteria and perform antibiotic sensitivity test.</p> <p>CO 2 - To estimate the physico-chemical parameters of water samples.</p> <p>CO 3 - To identify the producers and consumers of a pond ecosystem and measure the primary productivity.</p> <p>CO 4 - To extract and quantify genomic DNA.</p> <p>CO 5 - To prepare commercial products by using biotechnological methods.</p>
283	PZ17S2	SLC - Life Science for Competitive Examination II	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>PO 1 - To recognize the scientific facts behind natural phenomena.</p> <p>PO 2 - To relate the theory and practical knowledge to solve the problems of the society.</p> <p>PO 3 - To prepare successful professionals in industry, government, academia, research, entrepreneurial pursuits and consulting firms.</p>	<p>PSO 1 - To acquire knowledge on the various aspects of life sciences including Biochemistry, Cell and Molecular Biology, Genetics, Physiology, Developmental Biology, Ecobiology, Immunology, Microbiology, Endocrinology, Evolution, Biotechnology and Nanobiology.</p> <p>PSO 3 - To develop personal and key transferable skills such as group work, presentation and report writing.</p> <p>PSO 4 - To develop competence in the design and execution of research.</p> <p>PSO 5 - To independently assemble facts, summarize and draw conclusions from scientific text.</p>	<p>CO 1 - To explain advanced biological concepts, including molecular biology, genetics, ecology, and physiology, essential for competitive examinations</p> <p>CO 2 - To develop critical thinking and problem-solving skills, enabling them to analyze scientific data, interpret experimental results, and draw logical</p> <p>CO 3 - To apply exam techniques and strategies, including time management, question interpretation, and effective answer presentation, to enhance their performance in competitive examinations.</p> <p>CO 4 - To integrate interdisciplinary knowledge from related scientific fields, such as chemistry and physics, to provide holistic answers and approaches to life science questions in competitive exams.</p>
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284	ZC1711	Major Core I - Invertebrate Zoology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 7 - To equip students with hands on training through various courses to enhance entrepreneurship skills.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 2 - To undertake studies in different Zoological disciplines like Biochemistry, Cell Biology, Genetics, Physiology, Developmental Biology, Ecology, Evolution, Immunology, Microbiology, Biostatistics and Computer applications.</p> <p>PSO 3 - To demonstrate practical skills and to interpret results.</p> <p>PSO 8 - To apply the knowledge attained from principles and concepts learned from specific subject areas to create local and global impact.</p>	<p>CO 1 - To identify major taxonomic groups, functional organization and their relationship with the environment.</p> <p>CO 2 - To communicate the major evolutionary innovations in invertebrate groups.</p> <p>CO 3 - To discuss the ecological and economic importance of invertebrates.</p> <p>CO 4 - To investigate invertebrates in laboratory and field conditions and identify major taxonomic groups.</p> <p>CO 5 - To observe, draw and synthesize information into ideas and concepts.</p> <p>CO 6 - To evaluate the animal diversity and develop their career opportunities as a taxonomist.</p>
285	ZC17P1	Major Practical I Invertebrate Zoology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 7 - To equip students with hands on training through various courses to enhance entrepreneurship skills.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 2 - To undertake studies in different Zoological disciplines like Biochemistry, Cell Biology, Genetics, Physiology, Developmental Biology, Ecology, Evolution, Immunology, Microbiology, Biostatistics and Computer applications.</p> <p>PSO 3 - To demonstrate practical skills and to interpret results.</p> <p>PSO 8 - To apply the knowledge attained from principles and concepts learned from specific subject areas to create local and global impact.</p>	<p>CO 1 - To identify and list the salient features of selected invertebrate types through the observation of both living and preserved specimens.</p> <p>CO 2 - To assess the anatomy of few invertebrates based on the dissection.</p> <p>CO 3 - To apply laboratory skills including microscopy, dissection and careful observation.</p> <p>CO 4 - To apply the skill of handling animals and identification in higher studies.</p> <p>CO 5 - To record the observation.</p>
286	ZNM171	NMEC - Public Health and Hygiene	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 7 - To equip students with hands on training through various courses to enhance entrepreneurship skills.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 2 - To undertake studies in different Zoological disciplines like Biochemistry, Cell Biology, Genetics, Physiology, Developmental Biology, Ecology, Evolution, Immunology, Microbiology, Biostatistics and Computer applications.</p> <p>PSO 3 - To demonstrate practical skills and to interpret results.</p> <p>PSO 8 - To apply the knowledge attained from principles and concepts learned from specific subject areas to create local and global impact.</p>	<p>CO 1 - To discuss the concepts of health and nutrition in relation to physical, mental, social and spiritual fitness.</p> <p>CO 2 - To manage personal health with respect to skin, hair, eye, ear and teeth.</p> <p>CO 3 - To apply the knowledge of maternity and child health.</p> <p>CO 4 - To design housing standards and employ good sanitary measures.</p> <p>CO 5 - To gain knowledge on first aid procedures and alternative medicine.</p>

287	ZC1721	Major Core II - Chordate Zoology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 7 - To equip students with hands on training through various courses to enhance entrepreneurship skills.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 2 - To undertake studies in different Zoological disciplines like Biochemistry, Cell Biology, Genetics, Physiology, Developmental Biology, Ecology, Evolution, Immunology, Microbiology, Biostatistics and Computer applications.</p> <p>PSO 3 - To demonstrate practical skills and to interpret results.</p> <p>PSO 8 - To apply the knowledge attained from principles and concepts learned from specific subject areas to create local and global impact.</p>	<p>CO 1 - To identify the systematic position of chordates.</p> <p>CO 2 - To describe the morphology and anatomy of selected chordates.</p> <p>CO 3 - To analyse the structural, ecological and behavioural adaptations pertaining to their mode of life.</p> <p>CO 4 - To employ taxonomic resources for animal collection and identification.</p> <p>CO 5 - To communicate knowledge both orally and in writing by means of assignments, group discussions and seminars.</p>
288	ZC17P2	Major Practical II Chordate Zoology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 7 - To equip students with hands on training through various courses to enhance entrepreneurship skills.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 2 - To undertake studies in different Zoological disciplines like Biochemistry, Cell Biology, Genetics, Physiology, Developmental Biology, Ecology, Evolution, Immunology, Microbiology, Biostatistics and Computer applications.</p> <p>PSO 3 - To demonstrate practical skills and to interpret results.</p> <p>PSO 8 - To apply the knowledge attained from principles and concepts learned from specific subject areas to create local and global impact.</p>	<p>CO 1 - To identify the systematic position and external morphology of selected chordate specimen.</p> <p>CO 2 - To gain knowledge on the anatomy and structural arrangements in selected chordate animals like frog and pigeon.</p> <p>CO 3 - To develop a love for nature through field visits to places of zoological importance by means of campus bird-watcher's diary.</p>
289	ZNM172	NMEC - Common Ailments and Simple Remedies	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 7 - To equip students with hands on training through various courses to enhance entrepreneurship skills.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 2 - To undertake studies in different Zoological disciplines like Biochemistry, Cell Biology, Genetics, Physiology, Developmental Biology, Ecology, Evolution, Immunology, Microbiology, Biostatistics and Computer applications.</p> <p>PSO 3 - To demonstrate practical skills and to interpret results.</p> <p>PSO 8 - To apply the knowledge attained from principles and concepts learned from specific subject areas to create local and global impact.</p>	<p>CO 1 - To enumerate the symptoms of common diseases</p> <p>CO 2 - To summarise common health problems like anaemia, diabetes, skin and dental problems and old age ailments.</p> <p>CO 3 - To apply preventive strategies to develop healthy society.</p> <p>CO 4 - To analyse the problems of changing lifestyle and its impact on human health.</p> <p>CO 5 - To evaluate the simple remedies for common ailments.</p>
290	ZC1731	Major Core III - Cell Biology	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 7 - To equip students with hands on training through various courses to enhance entrepreneurship skills.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 2 - To undertake studies in different Zoological disciplines like Biochemistry, Cell Biology, Genetics, Physiology, Developmental Biology, Ecology, Evolution, Immunology, Microbiology, Biostatistics and Computer applications.</p> <p>PSO 3 - To demonstrate practical skills and to interpret results.</p> <p>PSO 8 - To apply the knowledge attained from principles and concepts learned from specific subject areas to create local and global impact.</p>	<p>CO 1 - To identify the cell organelles and discuss their functions.</p> <p>CO 2 - To explain the structural organization of chromosomes and their significance.</p> <p>CO 3 - To describe the structure and functions of nucleic acids.</p> <p>CO 4 - To apply the knowledge of cell biology in cancer and stem cell research.</p> <p>CO 5 - To demonstrate cytological techniques.</p>
291	ZC1732	Major – Elective I (a) Biochemistry and Biophysics	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 7 - To equip students with hands on training through various courses to enhance entrepreneurship skills.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 2 - To undertake studies in different Zoological disciplines like Biochemistry, Cell Biology, Genetics, Physiology, Developmental Biology, Ecology, Evolution, Immunology, Microbiology, Biostatistics and Computer applications.</p> <p>PSO 8 - To apply the knowledge attained from principles and concepts learnt from specific subject areas to create a local and global impact.</p>	<p>CO 1 - To discuss the structure of an atom, molecule and their interactions.</p> <p>CO 2 - To evaluate the importance of buffer system and enzymes.</p> <p>CO 3 - To classify biological macromolecules and describe their structure and significance.</p> <p>CO 4 - To use methods and techniques of physics to study biological processes.</p> <p>CO 5 - To apply basic methods in the fields of biophysics, biochemistry.</p>
292	ZC1733	Major – Elective I (b) Clinical Lab Technology	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 7 - To equip students with hands on training through various courses to enhance entrepreneurship skills.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 2 - To undertake studies in different Zoological disciplines like Biochemistry, Cell Biology, Genetics, Physiology, Developmental Biology, Ecology, Evolution, Immunology, Microbiology, Biostatistics and Computer applications.</p> <p>PSO 8 - To apply the knowledge attained from principles and concepts learnt from specific subject areas to create a local and global impact.</p>	<p>CO 1 - To develop skills necessary for higher studies or placement in clinical laboratories.</p> <p>CO 2 - To acquire knowledge about laboratory techniques, maintenance of records and ethics of clinical labs.</p> <p>CO 3 - To perform basic clinical laboratory procedures using appropriate laboratory techniques.</p> <p>CO 4 - To use instruments in accordance with laboratory protocol.</p> <p>CO 5 - To calculate and interpret laboratory results using standard protocol.</p>

293	ZC1734	Major – Elective (c) Bioinstrumentation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 7 - To equip students with hands on training through various courses to enhance entrepreneurship skills.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 2 - To undertake studies in different Zoological disciplines like Biochemistry, Cell Biology, Genetics, Physiology, Developmental Biology, Ecology, Evolution, Immunology, Microbiology, Biostatistics and Computer applications.</p> <p>PSO 8 - To apply the knowledge attained from principles and concepts learnt from specific subject areas to create a local and global impact.</p>	<p>CO 1 - To gain basic knowledge on computer and information technology.</p> <p>CO 2 - To describe the contents and properties of the most important bioinformatics databases.</p> <p>CO 3 - To use appropriate programme for sequence analysis and trace phylogeny of an organism.</p> <p>CO 4 - To apply bioinformatics tools for drug designing.</p> <p>CO 5 - To use effective written and verbal communication in the bioinformatics research projects.</p>
294	ZC17P3	Major Practical III Cell Biology and Biochemistry and Biophysics	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To face challenging competitive examinations that offer rewarding careers in science and education.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 3 - To demonstrate practical skills and to interpret results.</p> <p>PSO 8 - To apply the knowledge attained from principles and concepts learned from specific subject areas to create local and global impact.</p>	<p>CO 1 - To apply basic methods in the fields of biophysics, biochemistry.</p> <p>CO 2 - To prepare squash and smear of biological samples and identify the cells.</p> <p>CO 3 - To develop skills in handling analytical instruments.</p> <p>CO 4 - To analyse biochemical constituents qualitatively and quantitatively.</p> <p>CO 5 - To use paper chromatography to separate biomolecules.</p> <p>CO 6 - To understand the structure of biomolecules and the principles of biological processes.</p>
295	ZA1731	Allied Zoology – General Zoology	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To face challenging competitive examinations that offer rewarding careers in science and education.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 3 - To demonstrate practical skills and to interpret results.</p> <p>PSO 8 - To apply the knowledge attained from principles and concepts learned from specific subject areas to create local and global impact.</p>	<p>CO 1 - To describe general principles of taxonomy on animal classification.</p> <p>CO 2 - To explain the specific characteristics of invertebrates and vertebrates.</p> <p>CO 3 - To explain the structure of cells, chromosomes and apply the knowledge of genetics in identifying genetic disorders.</p> <p>CO 4 - To explain the development and evolution of animal life.</p> <p>CO 5 - To recognize the major functions of organ systems in human body and the role played by animals in their environment.</p> <p>CO 6 - To apply diverse taxonomic resources for animal identification and simple experimental procedures pertaining to the course.</p>
296	ZA17S1	SLC - Ornamental Fish Culture	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 7 - To equip students with hands on training through various courses to enhance entrepreneurship skills.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 5 - To develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture , Sericulture, Apiculture , Poultry, Vermitechnology , Clinical Lab Technology and General Health Care.</p> <p>PSO 9 - To enhance professional empowerment to attain economic independence.</p>	<p>CO 1 - To choose materials necessary for setting an aquarium, accessories, popular ornamental fishes, feed, anesthetics and diseases.</p> <p>CO 2 - To demonstrate the construction of fish tanks, culture techniques and feed preparation</p> <p>CO 3 - To establish and maintain an aquarium for commercialization.</p> <p>CO 4 - To analyse the types of tanks, physico-chemical parameters and feed relevant for ornamental fishes.</p>
297	ZC1741	Major Core IV - Genetics	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To face challenging competitive examinations that offer rewarding careers in science and education.</p> <p>PO 6 - To impart communicative skills and ethical values.</p> <p>PO 7 - To equip students with hands on training through various courses to enhance entrepreneurship skills.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 2 - To undertake studies in different Zoological disciplines like Biochemistry, Cell Biology, Genetics, Physiology, Developmental Biology, Ecology, Evolution, Immunology, Microbiology, Biostatistics and Computer applications.</p> <p>PSO 8 - To apply the knowledge attained from principles and concepts learnt from specific subject areas to create a local and global impact.</p>	<p>CO 1 - To describe the fundamental principles of genetics based on Mendelian concepts.</p> <p>CO 2 - To gain knowledge on chromosome mapping and genetic concepts affecting society.</p> <p>CO 3 - To select and apply experimental procedures to solve genetic problems.</p> <p>CO 4 - To interpret the phenotype, genotype and karyotype and derive conclusions based on genetic data.</p> <p>CO 5 - To evaluate biological factors that influence human heredity.</p> <p>CO 6 - To recognize the experimental rationale of genetic studies and develop skills necessary for advanced study or research.</p>
298	ZC1742	Major – Elective II (a) Biostatistics and Computer Applications	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To face challenging competitive examinations that offer rewarding careers in science and education.</p> <p>PO 6 - To impart communicative skills and ethical values.</p> <p>PO 7 - To equip students with hands on training through various courses to enhance entrepreneurship skills.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 2 - To undertake studies in different Zoological disciplines like Biochemistry, Cell Biology, Genetics, Physiology, Developmental Biology, Ecology, Evolution, Immunology, Microbiology, Biostatistics and Computer applications.</p> <p>PSO 5 - To develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture , Sericulture, Apiculture , Poultry, Vermitechnology , Clinical Lab Technology and General Health Care.</p> <p>PSO 7 - To acquire the professional skills to handle ethical and legal issues and social responsibilities.</p> <p>PSO 8 - To apply the knowledge attained from principles and concepts learnt from specific subject areas to create a local and global impact.</p>	<p>CO 1 - To define terminologies applied in biostatistics.</p> <p>CO 2 - To collect, present and analyse biological data by appropriate statistical methods.</p> <p>CO 3 - To evaluate critically the statistical concepts.</p> <p>CO 4 - To utilize the computer skill for biological data management, analysis and graphical presentation.</p> <p>CO 5 - To develop the skill to apply statistical packages.</p>

299	ZC1743	Major – Elective II (b) Bioinformatics		<input checked="" type="checkbox"/>		<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To face challenging competitive examinations that offer rewarding careers in science and education.</p> <p>PO 6 - To impart communicative skills and ethical values.</p> <p>PO 7 - To equip students with hands on training through various courses to enhance entrepreneurship skills.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 2 - To undertake studies in different Zoological disciplines like Biochemistry, Cell Biology, Genetics, Physiology, Developmental Biology, Ecology, Evolution, Immunology, Microbiology, Biostatistics and Computer applications.</p> <p>PSO 5 - To develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture , Sericulture, Apiculture , Poultry, Vermitechnology , Clinical Lab Technology and General Health Care.</p> <p>PSO 6 - To plan their career goals and pursue higher studies to meet global challenges.</p> <p>PSO 7 - To acquire the professional skills to handle ethical and legal issues and social responsibilities.</p> <p>PSO 8 - To apply the knowledge attained from principles and concepts learnt from specific subject areas to create a local and global impact.</p>	<p>CO 1 - To gain basic knowledge on computer and information technology.</p> <p>CO 2 - To describe the contents and properties of the most important bioinformatics databases.</p> <p>CO 3 - To use appropriate programme for sequence analysis and trace phylogeny of an organism.</p> <p>CO 4 - To apply bioinformatics tools for drug designing.</p> <p>CO 5 - To use effective written and verbal communication in the bioinformatics research projects.</p>
300	ZC1744	Major – Elective II (c) Apiculture	<input checked="" type="checkbox"/>			<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To face challenging competitive examinations that offer rewarding careers in science and education.</p> <p>PO 6 - To impart communicative skills and ethical values.</p> <p>PO 7 - To equip students with hands on training through various courses to enhance entrepreneurship skills.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 2 - To undertake studies in different Zoological disciplines like Biochemistry, Cell Biology, Genetics, Physiology, Developmental Biology, Ecology, Evolution, Immunology, Microbiology, Biostatistics and Computer applications.</p> <p>PSO 4 - To communicate appropriately and effectively, in a scientific context using current technology.</p> <p>PSO 8 - To apply the knowledge attained from principles and concepts learnt from specific subject areas to create a local and global impact.</p>	<p>CO 1 - To attain knowledge on beekeeping and management.</p> <p>CO 2 - To identify apiary equipments and demonstrate the assembling of apiary.</p> <p>CO 3 - To describe bee biology and anatomy from the perspective of managing bees.</p> <p>CO 4 - To discuss the importance of honey, wax and bee venom.</p> <p>CO 5 - To outline the social behaviors of honey bees and associate apiculture with agriculture.</p>
301	ZC17P4	Major Practical IV Genetics and Biostatistics and Computer Applications	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To face challenging competitive examinations that offer rewarding careers in science and education.</p> <p>PO 6 - To impart communicative skills and ethical values.</p> <p>PO 7 - To equip students with hands on training through various courses to enhance entrepreneurship skills.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 2 - To undertake studies in different Zoological disciplines like Biochemistry, Cell Biology, Genetics, Physiology, Developmental Biology, Ecology, Evolution, Immunology, Microbiology, Biostatistics and Computer applications.</p> <p>PSO 4 - To communicate appropriately and effectively, in a scientific context using current technology.</p> <p>PSO 8 - To apply the knowledge attained from principles and concepts learnt from specific subject areas to create a local and global impact.</p>	<p>CO 1 - To gain knowledge on chromosome mapping and genetic concepts affecting society.</p> <p>CO 2 - To select and apply experimental procedures to solve genetic problems.</p> <p>CO 3 - To interpret the phenotype, genotype and karyotype and derive conclusions based on genetic data.</p> <p>CO 4 - To evaluate biological factors that influence human heredity.</p> <p>CO 5 - To recognize the experimental rationale of genetic studies and develop skills necessary for advanced study or research.</p>
302	ZA1741	Allied II – Theory: Applied Zoology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To face challenging competitive examinations that offer rewarding careers in science and education.</p> <p>PO 6 - To impart communicative skills and ethical values.</p> <p>PO 7 - To equip students with hands on training through various courses to enhance entrepreneurship skills.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 2 - To undertake studies in different Zoological disciplines like Biochemistry, Cell Biology, Genetics, Physiology, Developmental Biology, Ecology, Evolution, Immunology, Microbiology, Biostatistics and Computer applications.</p> <p>PSO 5 - To develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture , Sericulture, Apiculture , Poultry, Vermitechnology , Clinical Lab Technology and General Health Care.</p> <p>PSO 7 - To acquire the professional skills to handle ethical and legal issues and social responsibilities.</p> <p>PSO 8 - To apply the knowledge attained from principles and concepts learnt from specific subject areas to create a local and global impact.</p>	<p>CO 1 - To describe the various aspects of animal husbandry in economic development.</p> <p>CO 2 - To explain the appliances used in bee keeping and discuss the significance of apiculture.</p> <p>CO 3 - To rear silkworms, identify the disease and cocoon marketing.</p> <p>CO 4 - To gain knowledge for the establishment of poultry and dairy farm.</p> <p>CO 5 - To adopt aquaculture practices as a profitable hobby.</p>

303	ZA17P1	Allied II - Practical	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 6 - To impart communicative skills and ethical values.</p> <p>PO 7 - To equip students with hands on training through various courses to enhance entrepreneurship skills.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 2 - To undertake studies in different Zoological disciplines like Biochemistry, Cell Biology, Genetics, Physiology, Developmental Biology, Ecology, Evolution, Immunology, Microbiology, Biostatistics and Computer applications.</p> <p>PSO 3 - To demonstrate practical skills and to interpret results.</p> <p>PSO 4 - To communicate appropriately and effectively, in a scientific context using current technology.</p> <p>PSO 8 - To apply the knowledge attained from principles and concepts learnt from specific subject areas to create a local and global impact.</p>	<p>CO 1 - To identify and classify invertebrates and chordates.</p> <p>CO 2 - To estimate the salinity and oxygen content of water samples.</p> <p>CO 3 - To identify aquatic culturable organisms and their diseases.</p> <p>CO 4 - To develop skill in dissection and microscopy.</p> <p>CO 5 - To gain knowledge through field visit.</p>
304	ZC1751	Major Core V - Physiology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To face challenging competitive examinations that offer rewarding careers in science and education.</p> <p>PO 6 - To impart communicative skills and ethical values.</p> <p>PO 7 - To equip students with hands on training through various courses to enhance entrepreneurship skills.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 2 - To undertake studies in different Zoological disciplines like Biochemistry, Cell Biology, Genetics, Physiology, Developmental Biology, Ecology, Evolution, Immunology, Microbiology, Biostatistics and Computer applications.</p> <p>PSO 4 - To communicate appropriately and effectively, in a scientific context using current technology.</p> <p>PSO 8 - To apply the knowledge attained from principles and concepts learnt from specific subject areas to create a local and global impact.</p>	<p>CO 1 - To understand the basic anatomy of digestive, respiratory, excretory, homeostatic, neuromuscular, endocrine and reproductive system.</p> <p>CO 2 - To describe the functional mechanism of internal regulation by different organ systems.</p> <p>CO 3 - To compare various organ systems and discuss the adaptations exhibited by animals.</p> <p>CO 4 - To analyze the reason for diseases in man and other organisms.</p> <p>CO 5 - To use anatomical knowledge to predict physiological consequences.</p>
305	ZC1752	Major Core VI - Developmental Zoology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To face challenging competitive examinations that offer rewarding careers in science and education.</p> <p>PO 6 - To impart communicative skills and ethical values.</p> <p>PO 7 - To equip students with hands on training through various courses to enhance entrepreneurship skills.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 2 - To undertake studies in different Zoological disciplines like Biochemistry, Cell Biology, Genetics, Physiology, Developmental Biology, Ecology, Evolution, Immunology, Microbiology, Biostatistics and Computer applications.</p> <p>PSO 7 - To acquire the professional skills to handle ethical and legal issues and social responsibilities.</p> <p>PSO 9 - To enhance professional empowerment to attain economic independence.</p>	<p>CO 1 - To describe cleavage, morphogenetic movements and gastrulation.</p> <p>CO 2 - To explain gametogenesis, fertilization and parthenogenesis.</p> <p>CO 3 - To describe cleavage, morphogenetic movements and gastrulation.</p> <p>CO 4 - To acquire knowledge on organizer, gradient system foetal membranes and placentation in mammals</p> <p>CO 5 - To demonstrate metamorphosis and regeneration.</p> <p>CO 6 - To discuss Nuclear cytoplasmic interaction, assisted reproductive technology and birth control measures.</p>
306	ZC1753	Major Core VII - Ecology and Toxicology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To face challenging competitive examinations that offer rewarding careers in science and education.</p> <p>PO 6 - To impart communicative skills and ethical values.</p> <p>PO 7 - To equip students with hands on training through various courses to enhance entrepreneurship skills.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 4 - To communicate appropriately and effectively, in a scientific context using current technology.</p> <p>PSO 7 - To acquire the professional skills to handle ethical and legal issues and social responsibilities.</p> <p>PSO 8 - To apply the knowledge attained from principles and concepts learnt from specific subject areas to create a local and global impact.</p>	<p>CO 1 - To explain gametogenesis, fertilization and parthenogenesis.</p> <p>CO 2 - To describe cleavage, morphogenetic movements and gastrulation.</p> <p>CO 3 - To acquire knowledge on Organizer, gradient system foetal membranes and placentation in mammals</p> <p>CO 4 - To demonstrate metamorphosis and regeneration</p> <p>CO 5 - To discuss Nuclear cytoplasmic interaction, assisted reproductive technology and birth control measures.</p>
307	ZC1754	Major - Elective III (a) Aquaculture	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>PO 1 - To acquire interdisciplinary knowledge and the skill of designing and conducting experiments and interpreting scientific data.</p> <p>PO 2 - To communicate effectively, analyze critically and learn to adapt with respect to the socio-technological changes.</p> <p>PO 3 - To pursue higher studies in the relevant field, gain entrepreneurship skills and enhance employability.</p> <p>PO 5 - To face challenging competitive examinations that offer rewarding careers in science and education.</p> <p>PO 6 - To impart communicative skills and ethical values.</p> <p>PO 7 - To equip students with hands on training through various courses to enhance entrepreneurship skills.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 5 - To develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology, Clinical Lab Technology and General Health Care.</p> <p>PSO 9 - To enhance professional empowerment to attain economic independence.</p>	<p>CO 1 - To explain the construction of aquatic ponds and water quality management.</p> <p>CO 2 - To culture finfish and shellfish and live feed organisms.</p> <p>CO 3 - To demonstrate different culture methods.</p> <p>CO 4 - To gain knowledge on artificial feed preparation, diseases and their control measures.</p> <p>CO 5 - To describe capture techniques, fish preservation and marketing.</p> <p>CO 6 - To establish aquarium as a profitable hobby.</p>

309	ZC1755	Major – Elective III (b) Sericulture	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To face challenging competitive examinations that offer rewarding careers in science and education.</p> <p>PO 6 - To impart communicative skills and ethical values.</p> <p>PO 7 - To equip students with hands on training through various courses to enhance entrepreneurship skills.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 2 - To undertake studies in different Zoological disciplines like Biochemistry, Cell Biology, Genetics, Physiology, Developmental Biology, Ecology, Evolution, Immunology, Microbiology, Biostatistics and Computer applications.</p> <p>PSO 7 - To acquire the professional skills to handle ethical and legal issues and social responsibilities.</p> <p>PSO 8 - To apply the knowledge attained from principles and concepts learnt from specific subject areas to create a local and global impact.</p> <p>PSO 9 - To enhance professional empowerment to attain economic independence.</p>	<p>CO 1 - To explain the cultivation and maintenance of mulberry plantation.</p> <p>CO 2 - To identify the diseases and pests of mulberry plant and silk worm.</p> <p>CO 3 - To rear silkworms and gain knowledge on silk reeling.</p> <p>CO 4 - To evaluate the quality of cocoon and marketing.</p> <p>CO 5 - To acquire skills necessary for self-employment in sericulture.</p>
310	ZC1756	Major – Elective III (c) Marine Biology	<input checked="" type="checkbox"/>			<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 2 - To create innovative ideas through laboratory experiments.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 7 - To equip students with hands on training through various courses to enhance entrepreneurship skills.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 2 - To undertake studies in different Zoological disciplines like Biochemistry, Cell Biology, Genetics, Physiology, Developmental Biology, Ecology, Evolution, Immunology, Microbiology, Biostatistics and Computer applications.</p> <p>PSO 7 - To acquire the professional skills to handle ethical and legal issues and social responsibilities.</p> <p>PSO 8 - To apply the knowledge attained from principles and concepts learnt from specific subject areas to create a local and global impact.</p>	<p>CO 1 - To explain the influence of physico-chemical factors on marine organisms.</p> <p>CO 2 - To identify the impact of waves and tides on animal and plant population.</p> <p>CO 3 - To discuss the energy flow in the marine environment.</p> <p>CO 4 - To evaluate the economic importance of marine resources and the impact of pollutants.</p> <p>CO 5 - To use scientific technology to assess quantitative parameters in relation to distribution of marine biota.</p>
311	ZC17P5	Major Practical V Physiology and Developmental Zoology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To face challenging competitive examinations that offer rewarding careers in science and education.</p> <p>PO 6 - To impart communicative skills and ethical values.</p> <p>PO 7 - To equip students with hands on training through various courses to enhance entrepreneurship skills.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 2 - To undertake studies in different Zoological disciplines like Biochemistry, Cell Biology, Genetics, Physiology, Developmental Biology, Ecology, Evolution, Immunology, Microbiology, Biostatistics and Computer applications.</p> <p>PSO 7 - To acquire the professional skills to handle ethical and legal issues and social responsibilities.</p> <p>PSO 8 - To apply the knowledge attained from principles and concepts learnt from specific subject areas to create a local and global impact.</p>	<p>CO 1 - To explain the effect of abiotic factors on physiological process.</p> <p>CO 2 - To analyse major nutrients qualitatively and describe the principles of analytical instruments and its uses in physiology.</p> <p>CO 3 - To perform scientific mode of thinking; planning experiments, analyzing and evaluating data skills as scientific laboratory reports.</p> <p>CO 4 - To develop methodological approach to embryonic development.</p> <p>CO 5 - To identify instruments, tissues, embryonic structures in preparations, photographs and diagrams.</p>
312	ZSK175	SBC- Vermitechnology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 7 - To equip students with hands on training through various courses to enhance entrepreneurship skills.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 2 - To undertake studies in different Zoological disciplines like Biochemistry, Cell Biology, Genetics, Physiology, Developmental Biology, Ecology, Evolution, Immunology, Microbiology, Biostatistics and Computer applications.</p> <p>PSO 4 - To communicate appropriately and effectively, in a scientific context using current technology.</p> <p>PSO 7 - To acquire the professional skills to handle ethical and legal issues and social responsibilities.</p>	<p>CO 1 - To discuss the classification and categories of earthworms.</p> <p>CO 2 - To explain the biology of earthworms.</p> <p>CO 3 - To assess the importance of earthworms in soil fertility, medicine and pharmaceuticals.</p> <p>CO 4 - To design the methodology for vermiculture and for the production of vermicompost and vermiwash. CO-5 To prepare and market the vermicompost.</p>
313	ZC1761	Major Core VIII - Biotechnology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To face challenging competitive examinations that offer rewarding careers in science and education.</p> <p>PO 6 - To impart communicative skills and ethical values.</p> <p>PO 7 - To equip students with hands on training through various courses to enhance entrepreneurship skills.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 2 - To undertake studies in different Zoological disciplines like Biochemistry, Cell Biology, Genetics, Physiology, Developmental Biology, Ecology, Evolution, Immunology, Microbiology, Biostatistics and Computer applications.</p> <p>PSO 4 - To communicate appropriately and effectively, in a scientific context using current technology.</p> <p>PSO 7 - To acquire the professional skills to handle ethical and legal issues and social responsibilities.</p>	<p>CO 1 - To acquire knowledge of basic concepts of biotechnology and central dogma.</p> <p>CO 2 - To discuss the rDNA technology, DNA library, hybridoma technology, animal cell and tissue culture and gene therapy.</p> <p>CO 3 - To decide and apply appropriate tools and techniques in biotechnological manipulation.</p> <p>CO 4 - To explain the general principles of generating transgenic plants, animals and application of microbes pharmaceutical products.</p> <p>CO 5 - To undertake any responsibility as an individual and as a team in a multidisciplinary environment for landing in a job.</p>

314	ZC1762	Major Core IX - Immunology and microbiology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 2 - To create innovative ideas through laboratory experiments.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To face challenging competitive examinations that offer rewarding careers in science and education.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 2 - To undertake studies in different Zoological disciplines like Biochemistry, Cell Biology, Genetics, Physiology, Developmental Biology, Ecology, Evolution, Immunology, Microbiology, Biostatistics and Computer applications.</p> <p>PSO 7 - To acquire the professional skills to handle ethical and legal issues and social responsibilities.</p> <p>PSO 8 - To apply the knowledge attained from principles and concepts learnt from specific subject areas to create a local and global impact.</p>	<p>CO 1 - To identify the major components of the immune system at organ and cellular level.</p> <p>CO 2 - To discuss the types of immune response and mechanisms to eliminate antigens.</p> <p>CO 3 - To culture and identify the microorganisms based on morphological and staining techniques.</p> <p>CO 4 - To design analytical and experimental tasks involving microbiology and immunology.</p>
315	ZC1763	Major Core X - Evolutionary Biology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 2 - To create innovative ideas through laboratory experiments.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To face challenging competitive examinations that offer rewarding careers in science and education.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 2 - To undertake studies in different Zoological disciplines like Biochemistry, Cell Biology, Genetics, Physiology, Developmental Biology, Ecology, Evolution, Immunology, Microbiology, Biostatistics and Computer applications.</p> <p>PSO 6 - To plan their career goals and pursue higher studies to meet global challenges.</p>	<p>CO 1 - To explain the concepts of evolution, origin of life, geological time scale and evidences of evolution.</p> <p>CO 2 - To explain the theories of evolution, mechanism of speciation and extinction of organism.</p> <p>CO 3 - To apply Hardy-Weinberg equilibrium in population genetics.</p> <p>CO 4 - To outline the major transitions in evolution, from the origin of life to hominid evolution.</p> <p>CO 5 - To perform, analyse and report experimental observations in evolutionary biology.</p>
316	ZC1764	Major Elective IV (a) Applied Zoology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 2 - To create innovative ideas through laboratory experiments.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To face challenging competitive examinations that offer rewarding careers in science and education.</p> <p>PO 6 - To impart communicative skills and ethical values.</p> <p>PO 7 - To equip students with hands on training through various courses to enhance entrepreneurship skills.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 2 - To undertake studies in different Zoological disciplines like Biochemistry, Cell Biology, Genetics, Physiology, Developmental Biology, Ecology, Evolution, Immunology, Microbiology, Biostatistics and Computer applications.</p> <p>PSO 4 - To communicate appropriately and effectively, in a scientific context using current technology.</p> <p>PSO 5 - To develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology, Clinical Lab Technology and General Health Care.</p> <p>PSO 7 - To acquire the professional skills to handle ethical and legal issues and social responsibilities.</p> <p>PSO 9 - To enhance professional empowerment to attain economic independence</p>	<p>CO 1 - To apply the knowledge of animal husbandry in economic development.</p> <p>CO 2 - To identify the kinds of bees and the methods of bee keeping.</p> <p>CO 3 - To rear silkworms, harvest and market the cocoons.</p> <p>CO 4 - To apply skills and experience about the management of poultry and Dairy farming.</p> <p>CO 5 - To culture of economically important finfish and shell fishes.</p>
317	ZC1765	Major Elective IV (b) Poultry Science	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 2 - To create innovative ideas through laboratory experiments.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To face challenging competitive examinations that offer rewarding careers in science and education.</p> <p>PO 6 - To impart communicative skills and ethical values.</p> <p>PO 7 - To equip students with hands on training through various courses to enhance entrepreneurship skills.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 2 - To undertake studies in different Zoological disciplines like Biochemistry, Cell Biology, Genetics, Physiology, Developmental Biology, Ecology, Evolution, Immunology, Microbiology, Biostatistics and Computer applications.</p> <p>PSO 5 - To develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology, Clinical Lab Technology and General Health Care.</p> <p>PSO 7 - To acquire the professional skills to handle ethical and legal issues and social responsibilities.</p> <p>PSO 9 - To enhance professional empowerment to attain economic independence.</p>	<p>CO 1 - To explain different aspects of raising poultry for meat and eggs.</p> <p>CO 2 - To construct and maintain poultry house and management of poultry animals.</p> <p>CO 3 - To identify the diseases and implement control measures.</p> <p>CO 4 - To develop entrepreneurship skills and commercialize indigenous poultry farming.</p> <p>CO 5 - To provide consultancy service to the local community.</p>

318	ZC1766	Major Elective IV (c) Pest Management	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 2 - To create innovative ideas through laboratory experiments.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 5 - To face challenging competitive examinations that offer rewarding careers in science and education.</p> <p>PO 6 - To impart communicative skills and ethical values.</p> <p>PO 7 - To equip students with hands on training through various courses to enhance entrepreneurship skills.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 2 - To undertake studies in different Zoological disciplines like Biochemistry, Cell Biology, Genetics, Physiology, Developmental Biology, Ecology, Evolution, Immunology, Microbiology, Biostatistics and Computer applications.</p> <p>PSO 5 - To develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology, Clinical Lab Technology and General Health Care.</p> <p>PSO 7 - To acquire the professional skills to handle ethical and legal issues and social responsibilities.</p> <p>PSO 9 - To enhance professional empowerment to attain economic independence.</p>	<p>CO 1 - To outline the pest groups affecting different agricultural crops and control measures.</p> <p>CO 2 - To evaluate the control measures adopted for pests of household and stored products.</p> <p>CO 3 - To select correct IPM in cropping systems with traditional and alternative control measures.</p> <p>CO 4 - To analyze the impact of pesticides on environment and adopt better agricultural practices.</p> <p>CO 5 - To pursue advanced programme in entomology and seek employment opportunities.</p>
319	ZC17P6	Practical VI Ecology and Toxicology and Evolutionary Biology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 2 - To create innovative ideas through laboratory experiments.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 3 - To demonstrate practical skills and to interpret results.</p> <p>PSO 4 - To communicate appropriately and effectively, in a scientific context using current technology.</p> <p>PSO 7 - To acquire the professional skills to handle ethical and legal issues and social responsibilities.</p>	<p>CO 1 - To analyse the quality of water samples.</p> <p>CO 2 - To examine and identify the zooplanktons.</p> <p>CO 3 - To assess the evolutionary concepts through experiments.</p> <p>CO 4 - To study the natural ecosystem and report.</p>
320	ZC17P7	Practical VII Biotechnology and Immunology and Microbiology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 2 - To create innovative ideas through laboratory experiments.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 3 - To demonstrate practical skills and to interpret results.</p> <p>PSO 4 - To communicate appropriately and effectively, in a scientific context using current technology.</p> <p>PSO 7 - To acquire the professional skills to handle ethical and legal issues and social responsibilities.</p>	<p>CO 1 - To isolate genomic DNA.</p> <p>CO 2 - To perform quantitative, immunological and microbiological analysis.</p> <p>CO 3 - To differentiate Gram positive and negative bacteria.</p> <p>CO 4 - To identify lymphoid organs in a vertebrate model.</p> <p>CO 5 - To develop skills needed for future research in immunology, microbiology and biotechnology.</p>
321	ZSK176	SBC Project	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>PO 1 - To apply the acquired scientific knowledge to face day to day needs.</p> <p>PO 2 - To create innovative ideas through laboratory experiments.</p> <p>PO 3 - To carry out field works and projects independently and in collaboration with other institutions and industries.</p> <p>PO 4 - To reflect upon green initiatives and take responsible steps to build a sustainable environment.</p> <p>PO 6 - To impart communicative skills and ethical values.</p>	<p>PSO 1 - To acquire knowledge on biosystematics and functional organization of animals.</p> <p>PSO 2 - To undertake studies in different Zoological disciplines like Biochemistry, Cell Biology, Genetics, Physiology, Developmental Biology, Ecology, Evolution, Immunology, Microbiology, Biostatistics and Computer applications.</p> <p>PSO 3 - To demonstrate practical skills and to interpret results.</p> <p>PSO 4 - To communicate appropriately and effectively, in a scientific context using current technology.</p>	<p>CO 1 - To formulate research questions, design research methodologies, and implement data collection and analysis techniques appropriate to their field of study.</p> <p>CO 2 - To evaluate existing literature, identify gaps in knowledge, and develop innovative solutions to complex problems.</p> <p>CO 3 - To communicate research findings clearly and concisely through written reports, oral presentations, and visual aids, tailored to diverse audiences.</p> <p>CO 4 - To apply ethical standards in research, including issues related to plagiarism, data integrity, and the responsible use of human and animal subjects.</p> <p>CO 5 - To experience in both collaborative and independent research environments, developing teamwork skills and the ability to manage and complete projects autonomously.</p>
322	PZ1711	Core I - Biochemistry	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To recognize the scientific facts behind natural phenomena.</p> <p>PO 2 - To relate the theory and practical knowledge to solve the problems of the society.</p> <p>PO 3 - To prepare successful professionals in industry, government, academia, research, entrepreneurial pursuits and consulting firms.</p> <p>PO 4 - To face and succeed in high level competitive examinations like NET, GATE and TOFEL.</p> <p>PO 5 - To carry out internship programme and research projects to develop scientific skills and innovative ideas.</p> <p>PO 6 - To utilize the obtained scientific knowledge to create eco-friendly environment.</p> <p>PO 7 - To prepare expressive, ethical and responsible citizens with proven expertise.</p>	<p>PSO 1 - To acquire knowledge on the various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills such as group work, presentation and report writing.</p> <p>PSO 4 - To develop competence in the design and execution of research.</p> <p>PSO 5 - To independently assemble facts, summarize and draw conclusions from scientific text.</p>	<p>CO 1 - To assess the relationship between chemistry, physics and biology.</p> <p>CO 2 - To recognize the structure and functions of biomolecules.</p> <p>CO 3 - To discuss basic principles of metabolism and associated metabolic diseases.</p> <p>CO 4 - To demonstrate experiments and techniques related to biochemistry.</p> <p>CO 5 - To gain employability in industrial, biomedical and research laboratories.</p>

323	PZ1712	Core II - Cell and Molecular Biology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To recognize the scientific facts behind natural phenomena.</p> <p>PO 2 - To relate the theory and practical knowledge to solve the problems of the society.</p> <p>PO 3 - To prepare successful professionals in industry, government, academia, research, entrepreneurial pursuits and consulting firms.</p> <p>PO 4 - To face and succeed in high level competitive examinations like NET, GATE and TOFEL.</p> <p>PO 5 - To carry out internship programme and research projects to develop scientific skills and innovative ideas.</p> <p>PO 6 - To utilize the obtained scientific knowledge to create eco-friendly environment.</p> <p>PO 7 - To prepare expressive, ethical and responsible citizens with proven expertise.</p>	<p>PSO 1 - To acquire knowledge on the various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills such as group work, presentation and report writing.</p> <p>PSO 4 - To develop competence in the design and execution of research.</p> <p>PSO 5 - To independently assemble facts, summarize and draw conclusions from scientific text.</p>	<p>CO 1 - To recognize and describe the structural and functional organization of cell organelles.</p> <p>CO 2 - To illustrate dna replication and trace the flow of genetic information from dna to protein, protein sorting and trafficking.</p> <p>CO 3 - To summarise the cell cycle and proteins involved in the regulation and molecular defects leading to cancer.</p> <p>CO 4 - To identify signaling components and pathways.</p> <p>CO 5 - To apply the principles and techniques of molecular biology for further education and employment.</p>
324	PZ1713	Core III - Culture and Capture Fisheries	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To recognize the scientific facts behind natural phenomena.</p> <p>PO 2 - To relate the theory and practical knowledge to solve the problems of the society.</p> <p>PO 3 - To prepare successful professionals in industry, government, academia, research, entrepreneurial pursuits and consulting firms.</p> <p>PO 5 - To carry out internship programme and research projects to develop scientific skills and innovative ideas.</p> <p>PO 6 - To utilize the obtained scientific knowledge to create eco-friendly environment.</p> <p>PO 7 - To prepare expressive, ethical and responsible citizens with proven expertise.</p>	<p>PSO 1 - To acquire knowledge on the various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills such as group work, presentation and report writing.</p> <p>PSO 4 - To develop competence in the design and execution of research.</p> <p>PSO 5 - To independently assemble facts, summarize and draw conclusions from scientific text.</p>	<p>CO 1 - To acquire knowledge on different types of aquatic organisms and construction of ponds.</p> <p>CO 2 - To formulate the nutritional requirement of fishes and develop the breeding techniques.</p> <p>CO 3 - To explain the culture of finfish and shellfish and identify the diseases and control measures.</p> <p>CO 4 - To gain knowledge on fishery genetics and transgenic fishes.</p> <p>CO 5 - To identify fish resource, capture techniques and fish marketing.</p> <p>CO 6 - To develop entrepreneurship skill by employing fish processing techniques.</p>
325	PZ1714	Elective I - (a) Biosystematics and Biodiversity	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To recognize the scientific facts behind natural phenomena.</p> <p>PO 2 - To relate the theory and practical knowledge to solve the problems of the society.</p> <p>PO 6 - To utilize the obtained scientific knowledge to create eco-friendly environment.</p> <p>PO 7 - To prepare expressive, ethical and responsible citizens with proven expertise.</p>	<p>PSO 1 - To acquire knowledge on the various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills such as group work, presentation and report writing.</p> <p>PSO 4 - To develop competence in the design and execution of research.</p> <p>PSO 5 - To independently assemble facts, summarize and draw conclusions from scientific text.</p>	<p>CO 1 - To evaluate the importance, application, and practice of systematic biology.</p> <p>CO 2 - To outline the classification of animal kingdom.</p> <p>CO 3 - To collect, identify, preserve zoological specimens and assign systematic position based on international code of zoological nomenclature.</p> <p>CO 4 - To discuss the importance of biodiversity and its conservation.</p> <p>CO 5 - To assess the biodiversity and use library resources in biological research.</p>
326	PZ1715	Elective I - (b) Cell Technology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To recognize the scientific facts behind natural phenomena.</p> <p>PO 2 - To relate the theory and practical knowledge to solve the problems of the society.</p> <p>PO 6 - To utilize the obtained scientific knowledge to create eco-friendly environment.</p> <p>PO 7 - To prepare expressive, ethical and responsible citizens with proven expertise.</p>	<p>PSO 1 - To acquire knowledge on the various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills such as group work, presentation and report writing.</p>	<p>CO 1 - To explain isolation, culture, harvest and preservation of cell.</p> <p>CO 2 - To prepare tissues for microtechnique and identify stains to distinguish histological and histochemical preparations.</p> <p>CO 3 - To apply differential staining technique for identification of diseases.</p> <p>CO 4 - To analyse the applications of stem cell technology and tissue engineering.</p> <p>CO 5 - To apply theoretical knowledge of cell manipulation techniques in research.</p>
327	PZ17P1	Practical I Biochemistry, Cell and Molecular Biology, Culture and Capture Fisheries	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To recognize the scientific facts behind natural phenomena.</p> <p>PO 2 - To relate the theory and practical knowledge to solve the problems of the society.</p> <p>PO 3 - To prepare successful professionals in industry, government, academia, research, entrepreneurial pursuits and consulting firms.</p> <p>PO 6 - To utilize the obtained scientific knowledge to create eco-friendly environment.</p> <p>PO 7 - To prepare expressive, ethical and responsible citizens with proven expertise.</p>	<p>PSO 1 - To acquire knowledge on the various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills such as group work, presentation and report writing.</p> <p>PSO 4 - To develop competence in the design and execution of research.</p> <p>PSO 5 - To independently assemble facts, summarize and draw conclusions from scientific text.</p>	<p>CO 1 - To estimate the biomolecules and demonstrate the bio-techniques.</p> <p>CO 2 - To use the tools and techniques in cell biology.</p> <p>CO 3 - To prepare temporary mounting of cell and tissues.</p> <p>CO 4 - To assess the fish population and determine the age of fishes.</p> <p>CO 5 - To identify the factors that challenge aquaculture.</p>

328	PZ1721	Core IV - Biostatistics, Computer Applications and Bioinformatics	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To recognize the scientific facts behind natural phenomena.</p> <p>PO 2 - To relate the theory and practical knowledge to solve the problems of the society.</p> <p>PO 3 - To prepare successful professionals in industry, government, academia, research, entrepreneurial pursuits and consulting firms.</p> <p>PO 6 - To utilize the obtained scientific knowledge to create eco-friendly environment.</p> <p>PO 7 - To prepare expressive, ethical and responsible citizens with proven expertise.</p>	<p>PSO 1 - To acquire knowledge on the various aspects of life sciences including biochemistry, cell and molecular biology, genetics, physiology, developmental biology, ecobiology, immunology, microbiology, endocrinology, evolution, biotechnology and nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills such as group work, presentation and report writing.</p> <p>PSO 4 - To develop competence in the design and execution of research.</p> <p>PSO 5 - To independently assemble facts, summarize and draw conclusions from scientific text.</p>	<p>CO 1 - To choose appropriate sampling scheme and interpret biological data.</p> <p>CO 2 - To formulate hypothesis and test the significance.</p> <p>CO 3 - To apply the computer skills for biological data management and presentation.</p> <p>CO 4 - To use database similarity search and retrieval tools in sequence analysis.</p> <p>CO 5 - To develop skills in submitting molecular data to scientific community.</p>
329	PZ1722	Core V - Genetics and Evolution	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To recognize the scientific facts behind natural phenomena.</p> <p>PO 2 - To relate the theory and practical knowledge to solve the problems of the society.</p> <p>PO 6 - To utilize the obtained scientific knowledge to create eco-friendly environment.</p> <p>PO 7 - To prepare expressive, ethical and responsible citizens with proven expertise.</p>	<p>PSO 1 - To acquire knowledge on the various aspects of life sciences including Biochemistry, Cell and Molecular Biology, Genetics, Physiology, Developmental Biology, Ecobiology, Immunology, Microbiology, Endocrinology, Evolution, Biotechnology and Nanobiology.</p> <p>PSO 3 - To develop personal and key transferable skills such as group work, presentation and report writing.</p> <p>PSO 5 - To independently assemble facts, summarize and draw conclusions from scientific text.</p>	<p>CO 1 - To apply the principles of inheritance as formulated by mendel.</p> <p>CO 2 - To identify the alterations in chromosome number and structure.</p> <p>CO 3 - To explain the molecular and biochemical basis of genetic diseases.</p> <p>CO 4 - To explain the key concepts in population, evolutionary and quantitative genetics.</p> <p>CO 5 - To discuss the mechanism of molecular evolution and origin of primates and hominids.</p>
330	PZ1723	Core VI - Research Methodology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To recognize the scientific facts behind natural phenomena.</p> <p>PO 2 - To relate the theory and practical knowledge to solve the problems of the society.</p> <p>PO 4 - To face and succeed in high level competitive examinations like NET, GATE and TOFEL.</p> <p>PO 5 - To carry out internship programme and research projects to develop scientific skills and innovative ideas.</p> <p>PO 7 - To prepare expressive, ethical and responsible citizens with proven expertise.</p>	<p>PSO 1 - To acquire knowledge on the various aspects of life sciences including Biochemistry, Cell and Molecular Biology, Genetics, Physiology, Developmental Biology, Ecobiology, Immunology, Microbiology, Endocrinology, Evolution, Biotechnology and Nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills such as group work, presentation and report writing.</p> <p>PSO 4 - To develop competence in the design and execution of research.</p> <p>PSO 5 - To independently assemble facts, summarize and draw conclusions from scientific text.</p>	<p>CO 1 - To demonstrate a broad range of research methodologies and their relevance to specific research problems.</p> <p>CO 2 - To operate instruments like microscope, centrifuge, ph meter and spectrometer and perform experiments on histology, chromatography and electrophoretic techniques.</p> <p>CO 3 - To use scientific methods to develop hypotheses, design and execute experiments by selecting the appropriate research techniques.</p> <p>CO 4 - To conceptualize research processes, data presentation, report writing and publication in journals.</p>
331	PZ1724	Elective II - (a) Developmental Biology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To recognize the scientific facts behind natural phenomena.</p> <p>PO 2 - To relate the theory and practical knowledge to solve the problems of the society.</p> <p>PO 3 - To prepare successful professionals in industry, government, academia, research, entrepreneurial pursuits and consulting firms.</p> <p>PO 4 - To face and succeed in high level competitive examinations like NET, GATE and TOFEL.</p> <p>PO 5 - To carry out internship programme and research projects to develop scientific skills and innovative ideas.</p> <p>PO 6 - To utilize the obtained scientific knowledge to create eco-friendly environment.</p> <p>PO 7 - To prepare expressive, ethical and responsible citizens with proven expertise.</p>	<p>PSO 1 - To acquire knowledge on the various aspects of life sciences including Biochemistry, Cell and Molecular Biology, Genetics, Physiology, Developmental Biology, Ecobiology, Immunology, Microbiology, Endocrinology, Evolution, Biotechnology and Nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills such as group work, presentation and report writing.</p> <p>PSO 4 - To develop competence in the design and execution of research.</p> <p>PSO 5 - To independently assemble facts, summarize and draw conclusions from scientific text.</p>	<p>CO 1 - To discuss basic concepts and develop knowledge on major developmental processes.</p> <p>CO 2 - To explain the development of different organ and organ systems.</p> <p>CO 3 - To analyse the mechanisms regulating developmental processes.</p> <p>CO 4 - To evaluate the different technologies adopted in assisted reproduction.</p> <p>CO 5 - To apply the concepts in new areas of developmental biology.</p>
332	PZ1725	Elective II - (b) Bioinformatics	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To acquire interdisciplinary knowledge and the skill of designing and conducting experiments and interpreting scientific data.</p> <p>PO 2 - To communicate effectively, analyze critically and learn to adapt with respect to the socio-technological changes.</p> <p>PO 3 - To pursue higher studies in the relevant field, gain entrepreneurship skills and enhance employability.</p> <p>PO 5 - To carry out internship programme and research projects to develop scientific skills and innovative ideas.</p> <p>PO 6 - To utilize the obtained scientific knowledge to create eco-friendly environment.</p>	<p>PSO 1 - To acquire knowledge on the various aspects of life sciences including Biochemistry, Cell and Molecular Biology, Genetics, Physiology, Developmental Biology, Ecobiology, Immunology, Microbiology, Endocrinology, Evolution, Biotechnology and Nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills such as group work, presentation and report writing.</p> <p>PSO 4 - To develop competence in the design and execution of research.</p> <p>PSO 5 - To independently assemble facts, summarize and draw conclusions from scientific text.</p>	<p>CO 1 - To describe the basics of bioinformatics.</p> <p>CO 2 - To explain bioinformatics tools and data bases.</p> <p>CO 3 - To gain knowledge on sequence alignment and alignment programs.</p> <p>CO 4 - To identify the tools for drug discovery, docking and molecular phylogeny.</p> <p>CO 5 - To use bioinformatics tools for molecular data analysis and submission.</p>

333	PZ17P2	Practical II Biostatistics, Computer Applications and Bioinformatics, Genetics and Evolution and Research Methodology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To recognize the scientific facts behind natural phenomena.</p> <p>PO 2 - To relate the theory and practical knowledge to solve the problems of the society.</p> <p>PO 5 - To carry out internship programme and research projects to develop scientific skills and innovative ideas.</p> <p>PO 6 - To utilize the obtained scientific knowledge to create eco-friendly environment.</p>	<p>PSO 1 - To acquire knowledge on the various aspects of life sciences including Biochemistry, Cell and Molecular Biology, Genetics, Physiology, Developmental Biology, Ecobiology, Immunology, Microbiology, Endocrinology, Evolution, Biotechnology and Nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills such as group work, presentation and report writing.</p> <p>PSO 5 - To independently assemble facts, summarize and draw conclusions from scientific text.</p>	<p>CO 1 - To collect, analyze and interpret data using statistical methods.</p> <p>CO 2 - To compute data using ms excel and identify data bases using bioinformatic tools.</p> <p>CO 3 - To compute and calculate gene frequencies for solving genetic issues.</p> <p>CO 4 - To analyze the evolutionary concepts through experiments.</p> <p>CO 5 - To perform whole mounting of specimen, histotechniques and adopt separation procedures using chromatography.</p>
334	PZ1731	Core VII - Physiology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To recognize the scientific facts behind natural phenomena.</p> <p>PO 2 - To relate the theory and practical knowledge to solve the problems of the society.</p> <p>PO 3 - To prepare successful professionals in industry, government, academia, research, entrepreneurial pursuits and consulting firms.</p> <p>PO 4 - To face and succeed in high level competitive examinations like NET, GATE and TOFEL.</p> <p>PO 5 - To carry out internship programme and research projects to develop scientific skills and innovative ideas.</p> <p>PO 6 - To utilize the obtained scientific knowledge to create eco-friendly environment.</p> <p>PO 7 - To prepare expressive, ethical and responsible citizens with proven expertise.</p>	<p>PSO 1 - To acquire knowledge on the various aspects of life sciences including Biochemistry, Cell and Molecular Biology, Genetics, Physiology, Developmental Biology, Ecobiology, Immunology, Microbiology, Endocrinology, Evolution, Biotechnology and Nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills such as group work, presentation and report writing.</p> <p>PSO 4 - To develop competence in the design and execution of research.</p> <p>PSO 5 - To independently assemble facts, summarize and draw conclusions from scientific text.</p>	<p>CO 1 - To describe the anatomy of different physiological systems at the tissue and cellular levels.</p> <p>CO 2 - To evaluate the physiological functioning of different organs.</p> <p>CO 3 - To analyze the physiological changes in relation to environmental conditions.</p> <p>CO 4 - To identify different tissues related to anatomy and physiology from an evidence-based perspective.</p> <p>CO 5 - To carry out physiological studies in the laboratory, interpret data and graphs and write a report.</p>
335	PZ1732	Core VIII - Immunology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To recognize the scientific facts behind natural phenomena.</p> <p>PO 2 - To relate the theory and practical knowledge to solve the problems of the society.</p> <p>PO 4 - To face and succeed in high level competitive examinations like NET, GATE and TOFEL.</p> <p>PO 7 - To prepare expressive, ethical and responsible citizens with proven expertise.</p>	<p>PSO 1 - To acquire knowledge on the various aspects of life sciences including Biochemistry, Cell and Molecular Biology, Genetics, Physiology, Developmental Biology, Ecobiology, Immunology, Microbiology, Endocrinology, Evolution, Biotechnology and Nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills such as group work, presentation and report writing.</p> <p>PSO 4 - To develop competence in the design and execution of research.</p> <p>PSO 5 - To independently assemble facts, summarize and draw conclusions from scientific text.</p>	<p>CO 1 - To explain the importance of innate immune response in providing adaptive immunity.</p> <p>CO 2 - To know the evolution of immune molecules in different groups of animals.</p> <p>CO 3 - To differentiate the types of hypersensitive allergic reactions by seeing the symptoms and duration and suggest the remedies.</p> <p>CO 4 - To discuss the role of immune molecules in different diseases and organ transplantation.</p> <p>CO 5 - To demonstrate detailed knowledge and understanding of immunology and the way it is applied in diagnostic and therapeutic techniques and research.</p>
336	PZ1733	Elective III - (a) General Endocrinology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To recognize the scientific facts behind natural phenomena.</p> <p>PO 4 - To face and succeed in high level competitive examinations like NET, GATE and TOFEL.</p> <p>PO 7 - To prepare expressive, ethical and responsible citizens with proven expertise.</p>	<p>PSO 1 - To acquire knowledge on the various aspects of life sciences including Biochemistry, Cell and Molecular Biology, Genetics, Physiology, Developmental Biology, Ecobiology, Immunology, Microbiology, Endocrinology, Evolution, Biotechnology and Nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills such as group work, presentation and report writing.</p> <p>PSO 5 - To independently assemble facts, summarize and draw conclusions from scientific text.</p>	<p>CO 1 - To discuss the principles of endocrine system, hormonal communication and neuroendocrine mechanism in animals.</p> <p>CO 2 - To explain the secretion and transportation of hormones to maintain homeostasis.</p> <p>CO 3 - To apply the knowledge of endocrinology to understand hormone-related disorders.</p> <p>CO 4 - To explain women related physiological processes such as menstruation, gestation and lactation</p> <p>CO 5 - To correlate endocrine regulation of reproduction and metamorphosis in various invertebrates and vertebrates.</p>
337	PZ1734	Elective III - (b) Health Care	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>PO 1 - To recognize the scientific facts behind natural phenomena.</p> <p>PO 2 - To relate the theory and practical knowledge to solve the problems of the society.</p> <p>PO 3 - To prepare successful professionals in industry, government, academia, research, entrepreneurial pursuits and consulting firms.</p> <p>PO 5 - To carry out internship programme and research projects to develop scientific skills and innovative ideas.</p> <p>PO 6 - To utilize the obtained scientific knowledge to create eco-friendly environment.</p>	<p>PSO 1 - To acquire knowledge on the various aspects of life sciences including Biochemistry, Cell and Molecular Biology, Genetics, Physiology, Developmental Biology, Ecobiology, Immunology, Microbiology, Endocrinology, Evolution, Biotechnology and Nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills such as group work, presentation and report writing.</p> <p>PSO 4 - To develop competence in the design and execution of research.</p> <p>PSO 5 - To independently assemble facts, summarize and draw conclusions from scientific text.</p>	<p>CO 1 - To realize quality life and factors that determine health.</p> <p>CO 2 - To identify personal health problems and its remedies.</p> <p>CO 3 - To gain knowledge on motherhood and childcare.</p> <p>CO 4 - To describe mental and environmental health hazards.</p> <p>CO 5 - To discuss alternative medicines and apply safety and first aid measures.</p>

338	PZ17P3	Practical III Physiology and Immunology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To recognize the scientific facts behind natural phenomena.</p> <p>PO 2 - To relate the theory and practical knowledge to solve the problems of the society.</p> <p>PO 5 - To carry out internship programme and research projects to develop scientific skills and innovative ideas.</p>	<p>PSO 1 - To acquire knowledge on the various aspects of life sciences including Biochemistry, Cell and Molecular Biology, Genetics, Physiology, Developmental Biology, Ecobiology, Immunology, Microbiology, Endocrinology, Evolution, Biotechnology and Nanobiology.</p> <p>PSO 3 - To develop personal and key transferable skills such as group work, presentation and report writing.</p> <p>PSO 4 - To develop competence in the design and execution of research.</p> <p>PSO 5 - To independently assemble facts, summarize and draw conclusions from scientific text.</p>	<p>CO 1 - To gain knowledge on the functioning of organ and organ systems.</p> <p>CO 2 - To demonstrate the effect of abiotic factors on the physiology of the systems through experiments.</p> <p>CO 3 - To identify the immune cells in a blood smear.</p> <p>CO 4 - To demonstrate immune-techniques on antigen-antibody interaction.</p>
339	PZ17S1	SLC- Life Science for Competitive Examinations I	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>PO 1 - To recognize the scientific facts behind natural phenomena.</p> <p>PO 2 - To relate the theory and practical knowledge to solve the problems of the society.</p> <p>PO 3 - To prepare successful professionals in industry, government, academia, research, entrepreneurial pursuits and consulting firms.</p>	<p>PSO 1 - To acquire knowledge on the various aspects of life sciences including Biochemistry, Cell and Molecular Biology, Genetics, Physiology, Developmental Biology, Ecobiology, Immunology, Microbiology, Endocrinology, Evolution, Biotechnology and Nanobiology.</p> <p>PSO 3 - To develop personal and key transferable skills such as group work, presentation and report writing.</p> <p>PSO 4 - To develop competence in the design and execution of research.</p> <p>PSO 5 - To independently assemble facts, summarize and draw conclusions from scientific text.</p>	<p>CO 1 - To explain advanced biological concepts, including molecular biology, genetics, ecology, and physiology, essential for competitive examinations.</p> <p>CO 2 - To develop critical thinking and problem-solving skills, enabling them to analyze scientific data, interpret experimental results, and draw logical.</p> <p>CO 3 - To apply exam techniques and strategies, including time management, question interpretation, and effective answer presentation, to enhance their performance in competitive examinations.</p> <p>CO 4 - To integrate interdisciplinary knowledge from related scientific fields, such as chemistry and physics, to provide holistic answers and approaches to life science questions in competitive exams.</p>
340	PZ17PR	Project	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To recognize the scientific facts behind natural phenomena.</p> <p>PO 2 - To relate the theory and practical knowledge to solve the problems of the society.</p> <p>PO 3 - To prepare successful professionals in industry, government, academia, research, entrepreneurial pursuits and consulting firms.</p> <p>PO 5 - To carry out internship programme and research projects to develop scientific skills and innovative ideas.</p> <p>PO 6 - To utilize the obtained scientific knowledge to create eco-friendly environment.</p>	<p>PSO 1 - To acquire knowledge on the various aspects of life sciences including Biochemistry, Cell and Molecular Biology, Genetics, Physiology, Developmental Biology, Ecobiology, Immunology, Microbiology, Endocrinology, Evolution, Biotechnology and Nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills such as group work, presentation and report writing.</p> <p>PSO 4 - To develop competence in the design and execution of research.</p> <p>PSO 5 - To independently assemble facts, summarize and draw conclusions from scientific text.</p>	<p>CO 1 - To demonstrate a broad range of research methodologies and their relevance to specific research problems.</p> <p>CO 2 - To operate instruments like microscope, centrifuge, ph meter and spectrometer and perform experiments on histology, chromatography and electrophoretic techniques.</p> <p>CO 3 - To use scientific methods to develop hypotheses, design and execute experiments by selecting the appropriate research techniques.</p> <p>CO 4 - To conceptualize research processes, data presentation, report writing and publication in journals</p>
341	PZ1741	Core IX - Microbiology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To recognize the scientific facts behind natural phenomena.</p> <p>PO 2 - To relate the theory and practical knowledge to solve the problems of the society.</p> <p>PO 3 - To prepare successful professionals in industry, government, academia, research, entrepreneurial pursuits and consulting firms.</p> <p>PO 4 - To face and succeed in high level competitive examinations like NET, GATE and TOFEL.</p> <p>PO 5 - To carry out internship programme and research projects to develop scientific skills and innovative ideas.</p> <p>PO 6 - To utilize the obtained scientific knowledge to create eco-friendly environment.</p> <p>PO 7 - To prepare expressive, ethical and responsible citizens with proven expertise.</p>	<p>PSO 1 - To acquire knowledge on the various aspects of life sciences including Biochemistry, Cell and Molecular Biology, Genetics, Physiology, Developmental Biology, Ecobiology, Immunology, Microbiology, Endocrinology, Evolution, Biotechnology and Nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills such as group work, presentation and report writing.</p> <p>PSO 4 - To develop competence in the design and execution of research.</p> <p>PSO 5 - To independently assemble facts, summarize and draw conclusions from scientific text.</p>	<p>CO 1 - To explain the structure, distribution, classification and life cycle of microorganisms.</p> <p>CO 2 - To culture microbes by selecting appropriate culture media.</p> <p>CO 3 - To explain the role of microbes in food industries and environmental cleaning.</p> <p>CO 4 - To identify the microbial pathogen and preventive measures.</p> <p>CO 5 - To develop microbiological laboratory skills applicable to clinical research.</p>
342	PZ1742	Core X - Ecobiology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To recognize the scientific facts behind natural phenomena.</p> <p>PO 2 - To relate the theory and practical knowledge to solve the problems of the society.</p> <p>PO 3 - To prepare successful professionals in industry, government, academia, research, entrepreneurial pursuits and consulting firms.</p> <p>PO 4 - To face and succeed in high level competitive examinations like NET, GATE and TOFEL.</p> <p>PO 5 - To carry out internship programme and research projects to develop scientific skills and innovative ideas.</p> <p>PO 6 - To utilize the obtained scientific knowledge to create eco-friendly environment.</p> <p>PO 7 - To prepare expressive, ethical and responsible citizens with proven expertise.</p>	<p>PSO 1 - To acquire knowledge on the various aspects of life sciences including Biochemistry, Cell and Molecular Biology, Genetics, Physiology, Developmental Biology, Ecobiology, Immunology, Microbiology, Endocrinology, Evolution, Biotechnology and Nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills such as group work, presentation and report writing.</p> <p>PSO 4 - To develop competence in the design and execution of research.</p> <p>PSO 5 - To independently assemble facts, summarize and draw conclusions from scientific text.</p>	<p>CO 1 - To explain the interaction of organisms with the physical and biological environment.</p> <p>CO 2 - To compare the differences in the structure and function of different types of ecosystems.</p> <p>CO 3 - To assess the human population increase with respect to anthropological activities and environmental impact.</p> <p>CO 4 - To use scientific knowledge of ecology to evaluate contemporary social and environmental issues.</p> <p>CO 5 - To formulate hypotheses and test them by designing appropriate experiments, analyze, interpret data and report</p> <p>CO 6 - To participate in environmental protection and conservation.</p>

343	PZ1743	Core XI - Biotechnology and Nanobiology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To recognize the scientific facts behind natural phenomena.</p> <p>PO 2 - To relate the theory and practical knowledge to solve the problems of the society.</p> <p>PO 3 - To prepare successful professionals in industry, government, academia, research, entrepreneurial pursuits and consulting firms.</p> <p>PO 5 - To carry out internship programme and research projects to develop scientific skills and innovative ideas.</p> <p>PO 6 - To utilize the obtained scientific knowledge to create eco-friendly environment.</p> <p>PO 7 - To prepare expressive, ethical and responsible citizens with proven expertise.</p>	<p>PSO 1 - To acquire knowledge on the various aspects of life sciences including Biochemistry, Cell and Molecular Biology, Genetics, Physiology, Developmental Biology, Ecobiology, Immunology, Microbiology, Endocrinology, Evolution, Biotechnology and Nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills such as group work, presentation and report writing.</p> <p>PSO 4 - To develop competence in the design and execution of research.</p> <p>PSO 5 - To independently assemble facts, summarize and draw conclusions from scientific text.</p>	<p>CO 1 - To explain the basic concepts of gene cloning and the importance of DNA sequencing in biotechnological intervention.</p> <p>CO 2 - To demonstrate cell culture techniques and prepare protocol to perform experiments.</p> <p>CO 3 - To identify the progression of biotechnology in different areas like medicine, agriculture, environmental sustainability and forensics.</p> <p>CO 4 - To apply the knowledge of genetically modified organism in bioremediation.</p> <p>CO 5 - To outline the basic concepts of nanotechnology, its applications and threat to the environment.</p> <p>CO 6 - To communicate the concepts of biotechnology and develop research skills.</p>
344	PZ1744	Elective IV - (a) Parasitology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To recognize the scientific facts behind natural phenomena..</p> <p>PO 2 - To relate the theory and practical knowledge to solve the problems of the society</p> <p>PO 3 - To prepare successful professionals in industry, government, academia, research, entrepreneurial pursuits and consulting firms.</p> <p>PO 6 - To utilize the obtained scientific knowledge to create eco-friendly environment.</p>	<p>PSO 1 - To acquire knowledge on the various aspects of life sciences including Biochemistry, Cell and Molecular Biology, Genetics, Physiology, Developmental Biology, Ecobiology, Immunology, Microbiology, Endocrinology, Evolution, Biotechnology and Nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills such as group work, presentation and report writing.</p> <p>PSO 4 - To develop competence in the design and execution of research.</p> <p>PSO 5 - To independently assemble facts, summarize and draw conclusions from scientific text.</p>	<p>CO 1 - To explain the basic biology and lifecycle of parasites including epidemiology, diagnosis and treatment.</p> <p>CO 2 - To recognize morphological characteristics for identification of parasites and their developmental stages.</p> <p>CO 3 - To identify appropriate techniques and develop basic skills for detection of parasites.</p> <p>CO 4 - To critically analyze, interpret and discuss factual information on parasites.</p> <p>CO 5 - To analyze the medical and public health aspects of human parasitic infections.</p> <p>CO 6 - To seek employment in veterinary hospitals, clinical and research laboratories.</p>
345	PZ1745	Elective IV - (b) Medical Entomology	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>PO 1 - To recognize the scientific facts behind natural phenomena..</p> <p>PO 2 - To relate the theory and practical knowledge to solve the problems of the society</p> <p>PO 3 - To prepare successful professionals in industry, government, academia, research, entrepreneurial pursuits and consulting firms.</p> <p>PO 6 - To utilize the obtained scientific knowledge to create eco-friendly environment.</p>	<p>PSO 1 - To acquire knowledge on the various aspects of life sciences including Biochemistry, Cell and Molecular Biology, Genetics, Physiology, Developmental Biology, Ecobiology, Immunology, Microbiology, Endocrinology, Evolution, Biotechnology and Nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To develop personal and key transferable skills such as group work, presentation and report writing.</p> <p>PSO 4 - To develop competence in the design and execution of research.</p> <p>PSO 5 - To independently assemble facts, summarize and draw conclusions from scientific text.</p>	<p>CO 1 - To identify the medically important arthropods by their general morphology and important characteristics.</p> <p>CO 2 - To describe the biology, ecology and geographical distribution of medically important pests and their role in transmission of diseases. enumerate strategies for prevention and care of vector borne diseases.</p> <p>CO 3 - To outline the biology of tropical parasites and vectors and the relationship between parasites and their hosts.</p> <p>CO 4 - To assess the immunological approaches in the control of parasitic infections.</p> <p>CO 5 - To outline the biology of tropical parasites and vectors and the relationship between parasites and their hosts.</p>
346	PZ17P4	Practical IV Microbiology and Biotechnology and Nanobiology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To recognize the scientific facts behind natural phenomena..</p> <p>PO 2 - To relate the theory and practical knowledge to solve the problems of the society</p> <p>PO 3 - To prepare successful professionals in industry, government, academia, research, entrepreneurial pursuits and consulting firms.</p> <p>PO 5 - To carry out internship programme and research projects to develop scientific skills and innovative ideas.</p> <p>PO 6 - To utilize the obtained scientific knowledge to create eco-friendly environment.</p>	<p>PSO 1 - To acquire knowledge on the various aspects of life sciences including Biochemistry, Cell and Molecular Biology, Genetics, Physiology, Developmental Biology, Ecobiology, Immunology, Microbiology, Endocrinology, Evolution, Biotechnology and Nanobiology.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 5 - To independently assemble facts, summarize and draw conclusions from scientific text.</p>	<p>CO 1 - To isolate, culture, stain and identify bacteria and perform antibiotic sensitivity test.</p> <p>CO 2 - To estimate the physico-chemical parameters of water samples.</p> <p>CO 3 - To identify the producers and consumers of a pond ecosystem and measure the primary productivity.</p> <p>CO 4 - To extract and quantify genomic DNA.</p> <p>CO 5 - To prepare commercial products by using biotechnological methods.</p>
347	PZ17S2	SLC - Life Science for Competitive Examination II	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>PO 1 - To recognize the scientific facts behind natural phenomena.</p> <p>PO 2 - To relate the theory and practical knowledge to solve the problems of the society.</p> <p>PO 3 - To prepare successful professionals in industry, government, academia, research, entrepreneurial pursuits and consulting firms.</p>	<p>PSO 1 - To acquire knowledge on the various aspects of life sciences including Biochemistry, Cell and Molecular Biology, Genetics, Physiology, Developmental Biology, Ecobiology, Immunology, Microbiology, Endocrinology, Evolution, Biotechnology and Nanobiology.</p> <p>PSO 3 - To develop personal and key transferable skills such as group work, presentation and report writing.</p> <p>PSO 4 - To develop competence in the design and execution of research.</p> <p>PSO 5 - To independently assemble facts, summarize and draw conclusions from scientific text.</p>	<p>CO 1 - To explain advanced biological concepts, including molecular biology, genetics, ecology, and physiology, essential for competitive examinations.</p> <p>CO 2 - To develop critical thinking and problem-solving skills, enabling them to analyze scientific data, interpret experimental results, and draw logical.</p> <p>CO 3 - To apply exam techniques and strategies, including time management, question interpretation, and effective answer presentation, to enhance their performance in competitive examinations.</p> <p>CO 4 - To integrate interdisciplinary knowledge from related scientific fields, such as chemistry and physics, to provide holistic answers and approaches to life science questions in competitive exams.</p>

348	MPZ181	C1: Professional skills for Teaching - Learning	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To gain information on the fundamental principles of research methods.</p> <p>PO 2 - To analyze complex problems, think indeoendently, formulate and perform quality research .</p> <p>PO 3 - To apply scientific knowledge and critically analyze the social and the ethical aspects.</p> <p>PO 4 - To emerge as expressive ethical and responsive citizens with proven expertise.</p>	<p>PSO 1 - To design and conduct experiments as well as interpret data statistically.</p> <p>PSO 3 - To apply the latest technologies in different sectors like diagnostics, drug discovery, pharmaceuticals, agriculture, aquaculture and pest management.</p> <p>PSO 5 - To communicate effectively the research findings to the scientific community.</p> <p>PSO 6 - To transfer the acquired knowledge from lab to land and onvolve in community based projects.</p>	<p>CO 1 - To gain knowledge on the differtent techniques of teaching.</p> <p>CO 2 - To understand the different techniques of teaching and learning.</p> <p>CO 3 - To facilitate e- learning and e- teaching with ICT tools.</p> <p>CO 4 - To apply the acquired knowledge in entry level services.</p>
349	MPZ182	C2- Research Methodology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To gain information on the fundamental principles of research methods.</p> <p>PO 2 - To analyze complex problems, think indeoendently, formulate and perform quality research .</p> <p>PO 3 - To apply scientific knowledge and critically analyze the social and the ethical aspects.</p> <p>PO 4 - To emerge as expressive ethical and responsive citizens with proven expertise.</p>	<p>PSO 1 - To design and conduct experiments as well as interpret data statistically.</p> <p>PSO 3 - To apply the latest technologies in different sectors like diagnostics, drug discovery, pharmaceuticals, agriculture, aquaculture and pest management.</p> <p>PSO 4 - To identify and solve global problems with professional and ethical responsibility.</p> <p>PSO 6 - To transfer the acquired knowledge from lab to land and onvolve in community based projects.</p>	<p>CO 1 - To independently work in a research environment, consolidate the outcome of research and write technical papers.</p> <p>CO 2 - To gain knowledge on the differtent techniques and bioinstruments that can be used for the research</p> <p>CO 3 - To develop computational skills and apply statistical tools in their research.</p> <p>CO 4 - To propose a research study, design an experiment and apply appropriate methodologies.</p> <p>CO 5 - To prepare a project proposal and apply for grant to finding agencies.</p> <p>CO 6 - To carryout advanced research in specialised areas and transmit their knowledge to the society.</p>
350	MPZ183	C3: Paper II- Recent Trends in Zoology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To gain information on the fundamental principles of research methods.</p> <p>PO 2 - To analyze complex problems, think indeoendently, formulate and perform quality research.</p> <p>PO 3 - To apply scientific knowledge and critically analyze the social and the ethical aspects.</p> <p>PO 4 - To emerge as expressive ethical and responsive citizens with proven expertise.</p>	<p>PSO 1 - To design and conduct experiments as well as interpret data statistically.</p> <p>PSO 3 - To apply the latest technologies in different sectors like diagnostics, drug discovery, pharmaceuticals, agriculture, aquaculture and pest management.</p> <p>PSO 4 - To identify and solve global problems with professional and ethical responsibility.</p> <p>PSO 5 - To communicate effectively the research findings to the scientific community.</p> <p>PSO 6 - To transfer the acquired knowledge from lab to land and onvolve in community based projects.</p> <p>PSO 7 - To implement innovations, market their products and develop entrepreneurial skills.</p>	<p>CO 1 - To gain knowledge on tissue engineering, transgenic biology and immunotechnology.</p> <p>CO 2 - To identify the molcular markers, analyse the methods of sequencing and therapeutic measures.</p> <p>CO 3 - To classify nanomaterials and discuss biomedical and environmental applications.</p> <p>CO 4 - To apply the knowledge gained from environmental education in ecological research</p> <p>CO 5 - To describe the significance of stem cell technology and its application in medicine.</p> <p>CO 6 - To follow ethical principles in handling biological materials.</p>
351	MPZ184	C4: Optional: In-depth study paper (a) Aquaculture	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To gain information on the fundamental principles of research methods.</p> <p>PO 2 - To analyze complex problems, think indeoendently, formulate and perform quality research.</p> <p>PO 3 - To apply scientific knowledge and critically analyze the social and the ethical aspects.</p> <p>PO 4 - To emerge as expressive ethical and responsive citizens with proven expertise.</p>	<p>PSO 1 - To design and conduct experiments as well as interpret data statistically.</p> <p>PSO 3 - To apply the latest technologies in different sectors like diagnostics, drug discovery, pharmaceuticals, agriculture, aquaculture and pest management.</p> <p>PSO 5 - To communicate effectively the research findings to the scientific community.</p> <p>PSO 6 - To transfer the acquired knowledge from lab to land and onvolve in community based projects.</p> <p>PSO 7 - To implement innovations, market their products and develop entrepreneurial skills.</p>	<p>CO 1 - To gain knowledge on rearing the aquatic organism in the selected aquatic environment.</p> <p>CO 2 - To assess the nutritional requirements and strategies for feeding management.</p> <p>CO 3 - To culture, harvest and market of finfish, shellfish and sea weed.</p> <p>CO 4 - To gain knowledge of beneficial and productive insects and conservation of the environment.</p> <p>CO 5 - To apply effective control measures for harmful insect pests.</p>
352	MPZ185	C4: Optional - In-depth study paper (b) Applied Entomology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To gain information on the fundamental principles of research methods.</p> <p>PO 2 - To analyze complex problems, think indeoendently, formulate and perform quality research .</p> <p>PO 3 - To apply scientific knowledge and critically analyze the social and the ethical aspects.</p> <p>PO 4 - To emerge as expressive ethical and responsive citizens with proven expertise.</p>	<p>PSO 1 - To design and conduct experiments as well as interpret data statistically.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To apply the latest technologies in different sectors like diagnostics, drug discovery, pharmaceuticals, agriculture, aquaculture and pest management.</p> <p>PSO 6 - To transfer the acquired knowledge from lab to land and onvolve in community based projects.</p> <p>PSO 7 - To implement innovations, market their products and develop entrepreneurial skills.</p>	<p>CO 1 - To classify insects according to their morphology ,lifecycle and habitat.</p> <p>CO 2 - To explain the anatomy and physiology of insects, identify pest insects of the major horticultural crop.</p> <p>CO 3 - To acquire knowledge on the on insect pest management techniques such as cultural , physical, biological, chemical ,IPM etc.</p> <p>CO 4 - To gain knowledge of beneficial and productive insects and conservation of the environment.</p> <p>CO 5 - To apply effective control measures for harmful insect pests.</p> <p>CO 6 - To review relevant research article in the field of pest management and plan sustainable agriculture.</p>
353	MPZ186	C4: Optional: In-depth study paper (c) Environmental Biology	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PO 1 - To gain information on the fundamental principles of research methods.</p> <p>PO 2 - To analyze complex problems, think indeoendently, formulate and perform quality research</p> <p>PO 3 - To apply scientific knowledge and critically analyze the social and the ethical aspects.</p> <p>PO 4 - To emerge as expressive ethical and responsive citizens with proven expertise.</p>	<p>PSO 1 - To design and conduct experiments as well as interpret data statistically.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To apply the latest technologies in different sectors like diagnostics, drug discovery, pharmaceuticals, agriculture, aquaculture and pest management.</p> <p>PSO 4 - To identify and solve global problems with professional and ethical responsibility.</p> <p>PSO 5 - To communicate effectively the research findings to the scientific community.</p> <p>PSO 6 - To transfer the acquired knowledge from lab to land and onvolve in community based projects.</p> <p>PSO 7 - To implement innovations, market their products and develop entrepreneurial skills.</p>	<p>CO 1 - To gain knowledge on diversity of life on earth and assess biodiversity.</p> <p>CO 2 - To iexplain the interrelatedness of human and the environment.</p> <p>CO 3 - To identify different environmental problems and suggest possible solutions.</p> <p>CO 4 - To identify Government policies to conserve biodiversity and pollution control.</p> <p>CO 5 - To apply scientific method to analyse and interpret data and communicate in both oral and written form.</p> <p>CO 6 - To accept employment in a variety of environmental and health related profession.</p>

354	MPZ187	C4: Optional: In-depth study paper (c) Applied Immunology and Microbiology		<input checked="" type="checkbox"/>	<p>PO 1 - To gain information on the fundamental principles of research methods.</p> <p>PO 2 - To analyze complex problems, think indeoendently, formulate and perform quality research.</p> <p>PO 3 - To apply scientific knowledge and critically analyze the social and the ethical aspects.</p> <p>PO 4 - To emerge as expressive ethical and responsive citizens with proven expertise.</p>	<p>PSO 1 - To design and conduct experiments as well as interpret data statistically.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course .</p> <p>PSO 3 - To apply the latest technologies in different sectors like diagnostics, drug discovery, pharmaceuticals, agriculture, aquaculture and pest management.</p> <p>PSO 4 - To identify and solve global problems with professional and ethical responsibility.</p> <p>PSO 5 - To communicate effectively the research findings to the scientific community.</p> <p>PSO 6 - To transfer the acquired knowledge from lab to land and onvolve in community based projects.</p> <p>PSO 7 - To implement innovations, market their products and develop entrepreneurial skills.</p>	<p>CO 1 - To elucidate the relationship between major cellulkar and molecular components of the immune system.</p> <p>CO 2 - To apply immunological techniques to solve clinical and research projects.</p> <p>CO 3 - To discuss the microbial diversity and its application in tissue engineering , therapeutics and environment.</p> <p>CO 4 - To apply molecular biological techniques in taxonomy and phylogeny.</p> <p>CO 5 - To review research articles in the field of applied immunology and microbiology and critically assimilate views on new findings.</p>
355	MPZ18D	Research Project			<p>PO 1 - To gain information on the fundamental principles of research methods.</p> <p>PO 2 - To analyze complex problems, think indeoendently, formulate and perform quality research .</p> <p>PO 3 - To apply scientific knowledge and critically analyze the social and the ethical aspects.</p> <p>PO 4 - To emerge as expressive ethical and responsive citizens with proven expertise.</p>	<p>PSO 1 - To design and conduct experiments as well as interpret data statistically.</p> <p>PSO 2 - To carry out experimental techniques and methods of statistical analysis appropriate for their course.</p> <p>PSO 3 - To apply the latest technologies in different sectors like diagnostics, drug discovery, pharmaceuticals, agriculture, aquaculture and pest management.</p> <p>PSO 4 - To identify and solve global problems with professional and ethical responsibility.</p> <p>PSO 5 - To communicate effectively the research findings to the scientific community.</p> <p>PSO 6 - To transfer the acquired knowledge from lab to land and onvolve in community based projects.</p> <p>PSO 7 - To implement innovations, market their products and develop entrepreneurial skills.</p>	<p>CO 1 - To formulate research questions, design research methodologies, and implement data collection and analysis techniques appropriate to their field of study.</p> <p>CO 2 - To evaluate existing literature, identify gaps in knowledge, and develop innovative solutions to complex problems.</p> <p>CO 3 - To communicate research findings clearly and concisely through written reports, oral presentations, and visual aids, tailored to diverse audiences.</p> <p>CO 4 - To apply ethical standards in research, including issues related to plagiarism, data integrity, and the responsible use of human and animal subjects.</p> <p>CO 5 - To experience in both collaborative and independent research environments, developing teamwork skills and the ability to manage and complete projects autonomously.</p>