

DEPARTMENT OF ZOOLOGY- B.Sc (CBZ)

Course Outcomes:

Paper	Paper Name	Outcomes <i>After completion of the course the student should be able to</i>
SEMESTER I		
PAPER – I	ANIMAL DIVERSITY – BIOLOGY OF NONCHORDATES	<p>CO1: know the taxonomic rules and animal classification.</p> <p>CO2: know the various characteristics from Protozoa to Coelenterata with taxonomic keys .</p> <p>CO3: Understand the parasites like <i>Ascarislumbricoides</i> and parasitic adaptations from Phylum Platy helminthes and importance of vermicomposting from Annelida.</p> <p>CO4: Understand the diversity of Phylum Arthropodato Mollusca using examples and importance of insects and Molluscans.</p> <p>CO5: understand the complexity of phyla Echinodermata to Hemichordata with suitable examples and larval stages in relation to the phylogeny.</p> <p>PRACTICAL</p> <ul style="list-style-type: none"> • To understand the importance of preservation of museum specimens • To identify animals based on special identifying characters • To understand different organ systems through demo or virtual dissections • To maintain a neat, labelled record of identified museum specimens.
SEMESTER II		
PAPER – II	ANIMAL DIVERSITY – BIOLOGY OF CHORDATES	CO 1: Understand general taxonomic rules of animal classification of chordates.

		<p>CO 2: Learn various characteristics of Protochordata to Mammalia with taxonomic keys .</p> <p>CO 3 :Understand Mammals with specific structural adaptaions.</p> <p>CO 4 : Understand the significance of dentition and evolutionary significance</p> <p>CO 5 :Understand the origin and evolutionary relationship of different phyla from Prochordata to mammalia.</p>
		<p>PRACTICAL</p> <ul style="list-style-type: none"> • To understand the taxidermic and other methods of preservation of chordates. • To identify chordates based on special identifying characters. • To understand internal anatomy of animals through demo or virtual dissections, thus directing the students for “empathy towards the fellow living beings”. • To maintain a neat, labelled record of identified museum specimens.

SEMESTER III

<p>PAPER – III</p>	<p>CELL BIOLOGY, GENETICS, MOLECULAR BIOLOGY AND EVOLUTION</p>	<p>CO1: To understand the basic unit of the living organisms and to differentiate the organisms by their cell structure.</p> <p>CO2: Learn fine structure and function of plasma membrane and different cell organelles of eukaryotic cell.</p> <p>CO3: To understandthe history of origin of branch of genetics, gain knowledge on heredity, interaction of genes, various types of inheritance patterns existing in animals .Acquiring in-depth knowledge on various aspects of genetics involved in sex determination, human karyotyping and mutations of chromosomes resulting in various disorders.</p>
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SEMESTER IV

<p>PAPER – IV:</p>	<p>ANIMAL PHYSIOLOGY, CELLULAR METABOLISM AND EMBRYOLOGY</p>	<p>CO1: Understand the functions of important animal physiological systems including digestive, circulatory, respiratory and renal systems.</p> <p>CO2: Understand the muscular system and the neuro-endocrine regulation of animal growth, development and metabolism with a special knowledge of hormonal control of human reproduction.</p> <p>CO3: Learn the structure, classification and chemistry of biomolecules and enzymes responsible for life in living organisms .</p> <p>CO4 : Develop broad understanding of the basic metabolic activities pertaining to the catabolism and anabolism of various biomolecules.</p>
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PAPER – V:	IMMUNOLOGY AND ANIMAL BIOTECHNOLOGY	<p>CO1 : Gain knowledge of the cells ,tissues and organs of Immune system, types of immunity.</p> <p>CO2 : Know about types of Antigens and Antibodies and immunological reactions.</p> <p>CO3 : Understand the Preparation of culture media ,techniques of Animal Cell, Tissue and Organ culture.</p> <p>CO4:Understand the applications of Biotechnology in the fields of industry , agriculture and medicine like stem cell technology and genetic engineering.</p> <p>CO5: Get familiar with the tools and techniques of animal biotechnology.</p> <p>PRACTICAL</p> <ul style="list-style-type: none"> •Interconnect the theoretical and practical knowledge of immunity with the outer world for the development of a healthier life. • Demonstrate basic laboratory skills necessary for Biotechnology research • Promoting application of the lab techniques for taking up research in higher studies.
SEMESTER V		
PAPER – VI(A)	SUSTAINABLE AQUACULTURE MANAGEMENT	<p>CO1 :Evaluate the present status of aquaculture at the Global level and National level.</p> <p>CO2 : understand the importance of different types of ponds used in aquaculture.</p> <p>CO3:Understand the method of induced</p>

		<p>breeding of carps. CO4:Acquire critical knowledge on commercial importance of shrimps CO 5 : Identify fin and shell fish diseases.</p>
		<p>PRACTICAL</p> <ul style="list-style-type: none"> • Identify the characters of Fresh water cultivable species. •Learn to estimate physico chemical characteristics of water used for aquaculture. • Examine the diseases of fin and shell fish. •learn the disease preventive measures in aquaculture.
<p>PAPER – VII(A)</p>	<p>POST HARVEST TECHNOLOGY OF FISH AND FISHERIES</p>	<p>CO1:Identify the types of preservation methods employed in aquaculture CO2:identified the suitable Processing methods in aquaculture CO 3 :Students will be able to understand the standard quality control protocols laid down in aqua industry CO4:Identify the best Seafood quality assurance system CO5:Will be familiar with post harvesting technology</p> <p>PRACTICAL</p> <ul style="list-style-type: none"> • Identify the quality of aqua processed products •.Determine the quality of fishery by products by observation • Analyze the protocols of aqua processing methods