

DEPARTMENT OF ZOOLOGY

| Programme outcomes: B. Sc. Zoology | |
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| Programme outcomes | After completing the three year's degree program in Zoology, students will be able to : |
| | Apply the knowledge of Zoology, Life Sciences and allied subjects to the understanding of complex life processes and phenomena. |
| | Students will know about Animal Systematic |
| | Will know about fundamentals of unit of life, a cell. |
| | Molecular biology pertains knowledge about enzymatic reactions in animals at molecular level. |
| | Genetics, a science of heredity and variations provides knowledge about genetic set up, interactions and its importance. |
| | Know the histology of various body organs and endocrine gland of mammals. |
| | Know the important role of lipid, carbohydrates, proteins and enzymes in body metabolism. |
| | Students should know about environment and the agents polluting it. |
| | Students will know about the harmful and useful organisms, insects and diseases caused by them. |
| Programme specific outcomes | Students gain fundamental but overall knowledge of Zoology through theory and practical courses. |
| | Students will know the basic body plan, organization and physiology of invertebrates and vertebrates in brief. |
| | Will know about environment and how to overcome the environmental crisis. |
| | To know the advanced techniques in Biology, Cell Biology, Molecular Biology, Genetics, Biotechnology and Physiology. |
| | After completing students may assist the pathologists, join courses in optometry, medical laboratory techniques, radiology, animal tissue culture, pest control, public health etc. |
| COURSE OUT COMES B. Sc. ZOOLOGY SEMESTER III | |
| Course | Outcomes |

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| ZY – 331 Animal Systematic and Diversity – V | <p>CO1 –to understand classification nomenclature and identification as well as diversity of organism and relationship among them</p> <hr/> <p>CO2 –Imparts conceptual of vertebrates their adaptation and association in relation to their environment</p> <hr/> <p>CO3 –To understand comparative study of vertebrates</p> <hr/> <p>CO4 –To understand affinity of Hemichordata</p> <hr/> <p>CO5 –To gain knowledge about accessory respiratory organ and electric organ in pices</p> |
| ZY- 332 (Paper II) Mammalian Histology | <p>CO1- to know the location and role of various tissue in brief.</p> <hr/> <p>CO2- To know the basic histological structures of Skin, Tongue, Tooth, kidney, Alimentary Canal, Reproductive organs, Endocrine glands, exocrine glands and digestive glands</p> <hr/> <p>CO3- To know the histological structures of Pituitary gland, Thyroid gland, Adrenal gland</p> |
| (ZY333) Biological Chemistry | <p>CO1 - Understanding the different Biomolecules in the body and their functions.</p> <hr/> <p>CO2 - Understand the body metabolism and its Enzymatic kinetics.</p> <hr/> <p>CO3 - Understanding the biological significance of biomolecules.</p> <hr/> <p>CO4 - Understanding different stereo chemical properties of biomolecules.</p> <hr/> <p>CO5 - Understanding the different factors affecting enzyme activities.</p> |
| ZY-334 (Paper IV) Environmental Biology and Toxicology | <p>CO-1. Import knowledge at to the student regarding Environmental Biology.</p> <hr/> <p>CO- 2. To understand type of ecosystem.</p> <hr/> <p>CO- 3. Acquire basic ideas about environmental and emerging issue about environmental problem.</p> <hr/> <p>CO- 4. Develop knowledge and understanding of the environment and enable the student to contribute towards maintaining and improving the quality of the environment.</p> <hr/> <p>CO-5. Aware about the need importance of environmental protection.</p> <hr/> <p>CO-6. Develop knowledge and understanding wildlife management.</p> <hr/> <p>CO- 7. To understand toxicant, types of toxicant and toxicity.</p> |
| ZY-335 (Paper V) Parasitology | <p>CO1-Study of disease causing organisms.</p> <hr/> <p>CO2-Important disease causing organisms, their habit, habitat, life cycle, damages caused and control measures.</p> |

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| | CO3-Importance of Public health. |
| | CO4-Study of arthropod born diseases like Malaria and others. |
| | CO5-Study of Bird flu, Rabies and Toxoplasmosis |
| | CO6-Study of epidemic diseases. |
| ZY-336 Cell Biology | 1) Students will understand the structures and purposes of basic components of prokaryotic and eukaryotic cells, especially macromolecules, membranes, and organelles |
| | 2. Students will understand how these cellular components are used to generate and utilize energy in cells. |
| | 3. Students will understand the cellular components underlying mitotic cell division. |
| | 4. Students will apply their knowledge of cell biology to selected examples of changes or losses in cell function. These can include responses to environmental or physiological changes, or alterations of cell function brought about by mutation. |
| | COURSE OUT COMES B. Sc. ZOOLOGY SEMESTER IV |
| ZY-341 Biological techniques | <ul style="list-style-type: none"> ● appreciate the use of microscopes |
| | <ul style="list-style-type: none"> ● describe the structure and functions of microscopes |
| | <ul style="list-style-type: none"> ● develop the skills, for focusing objects, under a microscope. |
| | <ul style="list-style-type: none"> ● describe some simple techniques for slide preparation. |
| | <ul style="list-style-type: none"> ● handle and take care of a microscope |
| | 2. distinguish between temporary and permanent slide preparations |
| | <ul style="list-style-type: none"> ● 3. describe the use of stains in slide preparations |
| | <ul style="list-style-type: none"> ● 4. describe how slides are labeled and stored |
| | <ul style="list-style-type: none"> ● Describe various types of microtomes, their working and use . |
| | <ul style="list-style-type: none"> ● carry out simple experiments on Calorimetry, discuss simple application of Calorimetry |
| | <ul style="list-style-type: none"> ● Understand the principle on which chromatography as a separation technique is based. |
| | <ul style="list-style-type: none"> ● Describe the different methods of chromatography available and Mention some applications of chromatography |
| | <ul style="list-style-type: none"> ● Understand the concept of Conductometry, Describe the measuring units involved in Conductometry , List some applications of Conductometry |

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| ZY – 342 Mammalian Physiology and Endocrinology | <p>CO1 –Impart knowledge about various metabolic and physiological mechanism of human body</p> <hr/> <p>CO2 –To understand the mechanism that work to keep the human body alive and functioning.</p> <hr/> <p>CO3 –Understand detailed process of digestion circulation respiration excretion nervous excitation and reproduction.</p> <hr/> <p>CO4 –To understand sliding filament theory of muscle contraction</p> <hr/> <p>CO5 –Gain knowledge about mechanism of hormone action and various endocrine disorders</p> |
| (ZY343) Genetics and Molecular Biology | <p>CO1 - Understanding the importance and scope of Genes and nucleic acids in modern zoology.</p> <hr/> <p>CO2 - Study Molecular events that govern cell functions.</p> <hr/> <p>CO3 - Gain the knowledge about Recombinant DNA Technology.</p> <hr/> <p>CO4 - Came to know about population genetics and genetic interactions.</p> <hr/> <p>CO5 - Understanding Central Dogma of Molecular Biology.</p> <hr/> <p>CO6 - Came to know about the Linkage, Crossing over, Recombination, Mutations that occurs in genetic material.</p> |
| ZY-344 (Paper IV)Organic Evolution | <p>CO-1. How life originates and how cells are form.</p> <hr/> <p>CO- 2. We come to know that different types of evidences show evolution in species.</p> <hr/> <p>CO- 3. Develop concept regarding various theory and experiment in organic evolution.</p> <hr/> <p>CO- 4. Isolated species are separated according to their characters.</p> <hr/> <p>CO- 5. Gen the knowledge of geographical realms.</p> <hr/> <p>CO- 6. Distribution of animal by different method and according to different factors.</p> <hr/> <p>CO- 7. To understand the evolution of man.</p> |
| ZY-345 (Paper V) General Embryology | <p>CO1 - Understanding the Pre-Fertilization, Fertilization and Post-Fertilization events that occur in animals.</p> <hr/> <p>CO2 - Understanding the different concepts in Developmental biology.</p> <hr/> <p>CO3 - Comparative study of general structure of Gametes.</p> <hr/> <p>CO4 - Study of Developmental stages of Chick at different hours.</p> <hr/> <p>CO5 - Understanding the different cell moments that occur during Embryonic Development and Body organizatio</p> |
| ZY-346 (b) Medical | <p>CO1-Study of insects with Medical and veterinary importance.</p> |

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| Entomology | CO2-Insects within home and their importance from public health point of view. |
| | CO3-Insects causing various diseases to human beings, their life cycle, diseases caused and control measures. |

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