Programme Oucomes,Programme Specific Outcomes (PSO) & Course Outcomes (CO) of B.Sc. Zoology: (Department of Zoology)

Programme Outcomes:

1. **PO1-** Students gain knowledge and skill in the fundamentals of Animal sciences, understands the complex interaction among various living organisms
2. **PO2-**Analyse the complex interaction among the various animals of different phyla, their distribution and their relationship with environment
3. **PO3-** Understands the complex evolutionary processes and behavior of Animals
4. **PO4-** Apply the knowledge of internal structure of cell its function in control of various metabolic functions of organisms.
5. **PO5-** Understanding of environmental conservation processes and importance, pollution control, biodiversity and endangered species protection.
6. **Po6-** Correlates the physiological processes of Animals and relationship of organ system.
7. **PO7-** Understands about various concepts of Genetics and its importance in human health.
8. **PO8-** Gain knowledge of agro based small scale industries like Sericulture, Vermicompost preparation, Fish farming
9. **PO9-** Apply ethical principles and commit to professional ethics and responsibilities in delivering his/her duties.
10. **PO10-** Apply the knowledge and understanding of Zoology to one's own life and work
11. **PO11-** Develops empathy and love towards the Animals

Programs Specific Outcome:

1. **PSO1-** Understand the nature and basic concepts of cell biology, genetics, Taxonomy, Physiology, ecology and Applied Zoology.
2. **PSO-**Analyse the relationship among animals, plants and microbes
3. **PSO3-** Gains knowledge about research methodologies, effective communication and skills of problem solving methods.
4. **PSO4-** Perform procedures as per laboratory standards in the areas of taxonomy, Physiology,Cell biology, Genetics,

5. **E**cology, Applied Zoology, Tools and Techniques of Zoology, Biochemistry, Immunology and Rresearch Methodology.
6. **PSO5-** Understands the applications of biological sciences in Apiculture,Aaquaculture and Medicine.
7. **PSO6-** Contributes the knowledge for Nation building.

Course Outcomes:

ISEM: BIOLOGY OF NONCHORDATA

CO1 Describe general taxonomic rules on animal classification

CO2 Classify Protista upto phylum using examples from parasitic adaptations

CO3 Classify Phylum Porifera to Echinodermata with taxonomic keys

CO4 Describe phylum Nematoda and give examples of pathogenic Nematodes

CO5 Imparts knowledge regarding various invertebrate species

CO6 With the study of this paper students gain knowledge in the areas of systematic position, general organization and affinities of different phyla

CO7 The students will be equipped to become very competent in research or teaching fields after completion of this course

IISEM: BIOLOGY OF CHORDATA

CO1 Imparts conceptual knowledge of vertebrates, their adaptations and associations in relation to their environment

CO2 Classify phylum Protochordates to Mammalia

CO3 Complex Vertebrate interaction.

CO4 Identification and studying application part of the vertebrates

IIISEM: COMPARATIVE ANATOMY OF VERTEBRATES AND HISTOLOGY

CO1 Students will understand the basic organ-systems of all vertebrates and their comparative evolution.

CO2 Understand the skeletal systems of all vertebrates

CO3 Study the histological details of different types of glands

CO4 Study the histological staining techniques helps them for further higher studies and to work in laboratories .

IVSEM: PHYSIOLOGY AND BIOCHEMISTRY

CO1 Seeks to understand the mechanism that work to keep the human body alive and functioning

CO2 Physiological and biochemical understanding through scientific enquiry into the nature of mechanical, physiological and biochemical function of humans, their organs and the cells of which they are composed

CO3 Interactions and interdependence of physiological and biochemical processes

CO4 Students are taught the detailed concepts of digestion respiration, excretion and the functioning of nerves, muscles

CO5 Students gain fundamental knowledge of animal physiology

CO6 Students will gain skills to execute the role of a biology teacher or medical lab technicians with training as they have basic fundamentals

CO7 Students learn the concepts of endocrine systems and homeostasis .

CO8 Students gain fundamental knowledge of physiology and endocrine system

VSEM (5.1): CELL AND DEVELOPMENTAL BIOLOGY

CO1 Structural and functional aspects of basic unit of life and cell concepts

CO2 Cell division, cell cycle and ultra structure of cell organelles

CO3 Study of Cancer and different types

CO4 Basic Concepts of developmental Biology

CO5 Study developmental stages of chordates

CO6 Mechanism involved in the developmental process

VSEM (5.2): GENETICS

CO1 Students understand the basic concepts of genetics, Laws of Inheritance and central dogma of biology

CO2 Mendelian and non mendielian inheritance

CO3 Concept behind genetic disorder, gene mutations – various causes associated with

inborn errors of metabolism

CO4 Study of blood groups and Rh factors

VISEM (6.1): ANIMAL BEHAVIOUR, EVOLUTION AND PALEONTOLOGY

CO1 Students understands the basic concepts of evolution,

CO2 Understand the genetic basis of evolution

CO3 Study Human genetic disorders

CO4 Theories of Evolution

CO5 Knowledge of eras and evolution of species

CO6 Human Evolution

CO7 Evidences of Evolution with examples

VISEM (6.2): ECOLOGY, ZOOGEOGRAPHY AND WILDLIFE BIOLOGY

CO1 Distribution of fauna in different realms interaction

CO2 Understand Animal behavior and response of animals to different instincts

CO3 Interaction of biota and abiota

CO4 Various kinds of Animal adaptation

CO5 Imparts knowledge to the students regarding environment and wild life

CO5 Gains knowledge in the areas of responses to Law of limiting factor & Law of minimum etc.,

CO6 Ecosystem, Types of ecosystem – freshwater, marine and terrestrial

CO7 Population characteristics and dynamics – conceptual approach

CBCS Syllabus Outcomes (From the Academic Year 2018-19 onwards)

ISEMESTER: DSC – 3A - ANIMAL DIVERSITY

CO1 Describe general taxonomic rules on animal classification

CO2 Classify Protista upto phylum using examples from parasitic adaptations

CO3 classify Phylum Porifera to Echinodermata with taxonomic keys

CO4 describe phylum Nematoda and give examples of pathogenic Nematodes

IISEMESTER: DSC – 3B - COMPARATIVE ANATOMY AND AND DEVELOPMENTAL BIOLOGY OF VERTEBRATES

CO1 Imparts conceptual knowledgeof vertebrates, their adaptations and associations in relation to their environment

CO2 Classify phylum Protochordates to Mammalia

CO3 Complex Vertebrate interactions

CO4 Basic Concepts of developmental Biology

CO5 Understand the various developmental stages and mechanism of development

IIISEMESTER: DSC – 3C - PHYSIOLOGY AND BIOCHEMISTRY

CO1 Seeks to understand the mechanism that work to keep the human body alive and functioning

CO2 Physiological and biochemical understanding through scientific enquiry into the natureCO3 Interactions and interdependence of physiological and biochemical processes

CO4 . Understand mechanical, physiological and biochemical function of humans, their organs and the cells of which they are composed

IVSEMESTER: DSC – 3D - GENETICS AND EVOLUTION

CO1 Structural and functional aspects of basic unit of life i.e cell concepts

CO2 Mendelian and non mendielian inheritance

CO3 Concept behind genetic disorder, gene mutations – various causes associated with inborn errors of metabolism

CO4 Theories of Evolution

CO5 Knowledge of eras and evolution of species

VSEM DSE-3: CELL AND MOLECULAR BIOLOGY

CO1 Structural and functional aspects of basic unit of life and cell concepts

CO2 Cell division, cell cycle and ultra-structure of cell organelles

CO3 Study of Cancer and different types

CO4 Understand about Nucleic acids DNA and RNA

CO5 study protein synthesis, gene expression and techniques in molecular biology