

Department of Zoology

Three year degree course (B.Sc.) & IV semester Programme M.Sc. in zoology a student should be able to....

Programme outcome-

PO1- As Zoology is very near to human being studying it provides us insight to ourselves

PO2- develop an awareness of the impact of zoology on the atmosphere.

PO3- To inculcate scientific thinking among the students.

PO4- understand the phylum history and evolution of chordates & non – Chordates by graph /picture/model etc.

PO5- to study and understand the micro-organism and their pathogenicity, symptoms & prevention.

PO6- Study of insects provides us with basis to deal with them efficiently in agriculture & day to day life.

PROGRAMM SPECIFIC OUTCOME

B. Sc. - I

PSO1- Help us to separately understand different types of Animals on basis of character and their organs.

PSO2- understand the cell transformation immunity & cancer.

PSO3- to study and understand difference between the vertebrate & invertebrate and their Physiology and anatomy.

PSO4- Development biology serves us to understand embryological stage & evolution.

First paper

COURSE OUTCOME-

1. The Cell & their component-

CO1- Understand the structure & function of cells and their component.

CO2- understand the DNA & RNA structure and Importance.

2. Cell transformation and immunity

CO1- to study the cell transformation & cancer and their agent.

CO2- understand about immunity and their role transplant rejection.

3. INVERTEBRATE & UNICELLULAR ANIMALS-

CO1- to study the internal as well as external character of Vertebrate.

4. PATHOGENIC VECTOR-

CO1- understand about pathogenic vector and their life cycle in different types of host.

CO2- To study the pathogenicity, prevention, signs, and symptoms.

5. PHYLLUM-MOLLUSCA AND ECHINODERM-

CO1- To study the classification & general character of Mollusca and their role in pearl/formation.

CO2- uses as a source of sea food, and economic importance.

B. Sc. I

Second paper

COURSE OUTCOME 1.

HEMICHORDATA AND PROTOCHORDATA

CO1- to study the evolutionary importance of hemichordate & protochordata.

CO2- understand the character, histology and affinities of hemi & protochordates.

2. FISH, AMPHIBIA, & REPTILES HISTOLOGY AND PARANTAL CARE.

CO1- understand the method of parental care in fishes and amphibian.

CO2- understand about migration of fishes, poisonous and non –poisonous snakes. & antivenin.

3. BIRDS & MAMMALS

CO1- the flight adaptation system of birds

CO2- to study the different types of mammals their adaptation and affinities.

4. PARTHENOGENESIS, EMBRYOLOGY OF CHICK & FROG

CO1- understand the formation of different types of organ of chick and frog.

CO2- understand the artificial fertilization and their role.

5. REGENERATION, PLACENTA & EMBRYONIC MEMBRANE

CO1- the extra embryonic membrane and their role.

CO2- study the types of placenta in different organism.

CO3- understand the cell repair method in the organism.

B. Sc. II

Program specific outcome –

PSO1- Understand the comparative anatomy of various organ system of vertebrate by picture model & Slide, graph.

PSO2- Know about cellular organization.

PSO3- Understand the physiology heart, muscle, nerve, ear & eye.

PSO4- Understand the blood coagulation system and their types through practical.

PSO5- To study the hormones receptor hormones gland and their disorder.

PSO6- To study and understand the evolutionary biology.

PSO7- To study about ethology & their pattern.

PSO8- Understand the method of apiculture, pisciculture sericulture etc.

Course outcome

Paper I

1. INTEGUMENT & ITS DERIVATIVES, ALIMENTARY & RESPIRATORY SYSTEM

CO1- Understand the role of integument in adaptation, evolution and protection.

CO2- to study the digestive & Respiratory system.

2. SKELETON, URINOGENITAL & CIRCULATORY SYSTEM

CO1- To study the evolution of heart & kidney, aortic arch and urogenital system.

CO2- understand the skeleton system in the chordate and their role.

3. ENDOCRINE GLAND & NERVOUS SYSTEM

CO1- to study the different types of endocrine gland and their role in the chordate.

CO2- understand about nervous system and their types by model and graph.

4. PHYSIOLOGY OF DIGESTION & RESPIRATION

CO1- To study and understand the mechanism of digestion and absorption.

CO2- understand the mechanism and control of breathing and cardiac cycle.

5. OSMOREGULATION, EXCRETION & STRUCTURE OF EYE AND EAR

CO1- understand the mechanism of osmoregulation .nerve impulse and excretion.

PAPER –II

COURSE OUTCOME

1. ENDOCRINOLOGY

CO1- to study the general character, action and disorder of hormones.

CO2- understand the role of hormones and their disorder.

2. REPRODUCTIVE BIOLOGY

CO1- Understand the Reproductive cycle in vertebrates

CO2- To study the Lactation and pregnancy and parturition

3. Evolutionary Biology

CO1- Understand the process of evolution and their evidences.

CO2- Understand the evolution factor and their role.

4. Ethnology Pattern of behaviour

CO1- Understand the role of behaviours in adaptation and different stages of ages.

CO2- Understanding the Pattern of behaviour.

5. Element and pest control and culture

CO1- To study the method of apiculture pisciculture sericulture, Poultry keeping and their economic Importance.

CO2- Understand the elements of pest control.

B.Sc –III

PROGRAM SPECIFIC OUTCOME

PSO1- To study and understand the aims & scope of ecology.

PSO2- solve the problems and also think methodology and draw a logical conclusion.

PSO3- to study the general & applied microbiology and their role.

PSO4- understand about pathogenic micro- organism their symptoms and treatment.

PSO5- Study and understand the DNA recombinant technique and cell physiology.

PAPER –I

COURSE OUTCOME -

1. ECOLOGY –

To study the major ecosystem of the world .population & communities, and succession.

CO1- to study about pollution and their pathogenic effect.

2. ENVIRONMENTAL BIOLOGY

CO1- understand the ecological interaction and their role in the environmental stability.

CO2- to study the environmental conservation & environmental impact assessment.

3. TOXICOLOGY

CO1- understand about different type of toxic material and their fatal period treatment.

CO2- and also animal poison sings &symptoms and treatment.

4. Microbiology

CO1- to study the advantages of micro – organism and their role in hormones, antibody and alcohol production.

CO2- understand the process of water and sewage treatment.

5. Medical microbiology

CO1- understand about the pathogenic micro-organism & their vector and treatment.

PAPER –II

COURSE OUTCOME

1. GENETICS- understand the gene interaction and expression method.

CO1- understand the chromosomal disorder & single gene disorder.

2. CELL PHYSIOLOGY

CO1- to study the general idea about buffer and pH system.

CO2- understand the cell membrane transportation & their role in the metabolic activity.

3. BIOCHEMISTRY

CO1- to study the basic structure & function of amino acid.

CO2- understand the metabolism of carbohydrates, protein and lipid,

4. BIOTECHNOLOGY

CO1- -understand the scope & importance of biotechnology.

CO2- to study of Gene Cloning the recombinant DNA technology and their application.

5. BIOTECHNIQUES

CO1- to study the separation method of biomolecule by chromatography, centrifuge.

CO2- types of microscopy and their uses.

PROGRAMME SPECIFIC OUTCOME

M.Sc. zoology

PSO1- Study of unicellular, multicellular organism & Invertebrates structure gives student basis of Zoology.

PSO2- Student study physiology of Invertebrates, life cycles & larval form which gives them understanding of different kind of diseases.

PSO3- Understanding the animal behaviour & their importance in our life & Environment.

PSO3- Study of quantitative biology benefits the student to analyse the data related to animals more accurately.

PSO4- Environmental issues, greenhouse effect, Ozone depletion, Environmental awareness programme are clarified in this semester.

PSO5- Practical related to soil & water analysis, Physiology & behaviour helps student understanding in better way.

PSO6- They shall be able to clarify the Comparative endocrinology of vertebrates.

PSO7- They shall be able to understand Hormonal regulation & its metabolic activity.

PSO8- Gets better understanding about Human reproductive organs.

PSO9- By studying molecular cell biology we deeply understand the structure and functioning of cell.

PSO10- Tools & techniques for biology helps students in better and efficient learning further in the course.

PSO11- They shall be able to clarify difference between various vertebrates by learning comparative anatomy of vertebrates.

PSO12- Study of Biosystematics & taxonomy helps students to understand classification of animal very well.

PSO13- They shall be able to understand concepts of immunology & development biology

PSO14- They shall be able to explain the Populations Genetics & evolution.

PSO15 Study of morphology Physiology & social life of insects benefits the mankind by protecting the agriculture through finding better ways

COURSE OUTCOME

Semester-1

CO After determination of these course students should be able to:

CO1- Know the cellular organism in a better way, various types of movements, Hydrostatic movement.

CO2- Should be able to understand the pattern of feeding & digestion.

CO3- Know & discuss easily the advance nervous system

CO4- Know deeply larval form of cestoda, crustacea, Mollusca

Semester-2

CO1- Get deep knowledge related to communication, evolution of language, aggregation.

CO2- Social organisation in insects and primates are understand fully.

CO3- Biological rhythms, migration of fish & bird are understand to students.

CO4- Concept of Learning & Memory of animals is clarified.

CO5- Kin selection, Altruism is understood.

CO6- They shall be able to understand the Synthesis of endocrine gland, function, control, disorder.

Semester-3

CO1- Collection & presentation of data Diagrammatic presentation is learn by student in this semester.

CO2- Helps in medical field through antigen antibody reaction, Elisa test

CO3- Major & Minor Histocompatibility complex helps medical students in organ transplant

Semester-4

CO6- They shall be able to understand the Male reproductive organ, female reproductive organ & biochemistry of fertilization

CO7- Students shall be able to understand Transport across cell membrane, Cell cycle, mechanism check point in cell cycle, cell organelles and Genome organism.

CO12- Gain knowledge of types of biodiversity, hotspot of biodiversity & conservation of biodiversity

CO15- Better understanding is gained by student in Gene evolution, Molecular Clock models of speciation, genetic drift, natural selection, meiotic drive & mutation

CO16- knowledge of insect such as apiculture, sericulture, helps in development of small scale industry.

CO17- Study of insects by biological and chemical pest control, students can know how to effectively use it in agriculture.