

M.Sc ZOOLOGY

Syllabus 2018

Semester – I

Core-I-Animal Diversity I – INVERTEBRATA

Sub code –PZOT11

Objectives

- Students will be able to identify and understand the basics of animal biology with a comparative knowledge on the organization in various animal groups

Core-II-Animal Diversity II – CHORDATES

Sub code –PZOT12

Core-III- CELL AND MOLECULAR BIOLOGY

Sub code –PZOT13

Objectives

- Students can understand the structure and functions of cell organelles. To understand the importance of the cell. To realize the significance of life, know about chromosome organization, expression & regulation.

PRACTICAL-I-ANIMAL DIVERSITY I & II AND CELL AND MOLECULAR BIOLOGY

Sub code-PZOP11

ELECTIVE – I- ENTOMOLOGY

Sub code- PZOE11

Objectives

- On the successful completion of the course, students will be able to classify the insects and will be able to identify the different insects. Learn the Beneficial aspects of Insects and Hazards of pests and their control measures

ELECTIVE -II- WILDLIFE BIOLOGY

Sub code-PZOE11

Objectives

- To acquaint and gain knowledge about wild life data, functional significance control and protective measures

Semester – II

CORE-IV-BIOCHEMISTRY

Sub code –PZOT21

Objectives

- On the successful completion of the course the students will get an over all understanding of Biomolecules, their structure and classifications, enzyme kinetics and metabolic reactions in a living system.

CORE-V-MICROBIOLOGY AND IMMUNOLOGY

Sub code-PZOT22

Objectives

- Students will be able to know the history ,development of Microbiology and fundamental knowledge about microbes. Understand and explore the world of microorganisms in different spheres of life. The students can have an understanding about the microbial diseases and the role of immune system against the infectious disease.

CORE-VI- MOLECULAR GENETICS

Sub code-PZOT23

Objectives

- Students will be able to understand the principles of genetics, inheritance, sex determination, chromosomal anomalies. To study the mechanism of heredity at molecular level.

Practical-II

BIOCHEMISTRY , MICROBIOLOGY & IMMUNOLOGY AND GENETICS

Sub code-PZOP22

ELECTIVE- III-AQUACULTURE

Sub code-PZOE22

Objectives

- This paper is planned to Gain knowledge in the fish food, feeding habits, investigating the seed production , farm management and method of farming. And this paper also to provide scope for employment opportunities in aquaculture activities.

ELECTIVE –IV-POLLUTION ECOLOGY

Sub code-PZOE22

Objectives

- To gain knowledge about environmental pollution, its deleterious effects and preventive measures

Semester III

CORE-VII-ANIMAL PHYSIOLOGY

Sub code-PZOT31

Objectives

- On the successful completion of the paper, students will be able to understand the structural organization of different systems within body with the functions of different organ systems in animals

CORE –VIII-DEVELOPMENTAL BIOLOGY AND EVOLUTION

Sub code-PZOT32

Objectives

- Students will be able to understand the basis of development learn the stages of organ development
- To comprehend the scientific concepts of animal evolution through an understanding of its evidences, its mechanics, process and products.

CORE-IX-ENVIRONMENTAL BIOLOGY

Sub code-PZOT33

Objectives

- Students will be able to understand the concepts and components of ecosystems Learn about biodiversity and different indices. To evaluate the pollution problems in different environment. To create awareness about the present scenario of the environment

PRACTICAL-III

ANIMAL PHYSIOLOGY, DEVELOPMENTAL BIOLOGY AND ENVIRONMENTAL BIOLOGY

Objectives

- Observation of forelimbs and hindlimbs of vertebrates (Frog, Calotes, Bird and Mammal)
- Observation of fossils to study paleontological evidences of evolution. Living fossil: Peripatus, Adaptation in beak and feet of birds Animal fossil: Physa princepi
- Observation of leaf insects and stick insects in the museum to study adaptation by cryptic colouration and natural selection
- Observation of Monarch and Viceroy butterflies to study Batesian mimicry and mullerian mimicry
- Study of polygenetic inheritance among students using finger print
- Hardy - Weinberg Law & Calculation of Gene Frequency of Dominant and Recessive using two different colour beads.

ELECTIVE-V-BIOTECHNOLOGY

Sub code-PZOE33

Objectives

- Students will be able to understand the basic principles of genetic engineering learn the fundamental steps in gene cloning and manipulation and know the popular techniques used in biotechnology.

ELECTIVE-VI-BIOINFORMATICS

Sub code-PZOE33

Objectives

- Students will be able to learn the basic approaches in structure prediction” –concept and familiarize in applying bioinformatic tools in biomedical research.

SEMESTER – IV

CORE-X-RESEARCH METHODOLOGY

Sub code-PZOT41

Objectives

The students will be able to identify, design and execute research problems on their own search and collect relevant literature from various sources prepare research reports and thesis. Gain theoretical and practical knowledge about bio instruments.



