

# **Department of Zoology**

## **B.Sc. Zoology**

### **Programme Outcomes**

1. Demonstrate understanding of, and solve major conceptual problems in, all disciplines of Zoology.
2. Solve problems by thinking methodically, independently and by drawing logical conclusions.
3. Understand the process of evolution, history and classification of major animal groups.
4. Create an awareness of the impact of animals on the environment, society, and development outside the scientific community.
5. To inculcate scientific temperament in the students and in the general community.
6. Acquaint themselves with and use modern techniques, equipment and Zoology related software.
7. Prepare for a career in Zoological Survey of India, different fishery research organizations, MNCs involved in fishing and allied industries.
8. Take up fish culture, fish processing and allied food and by-product processing industry (like bee keeping, sericulture, lac culture, pearl culture, etc.) as a profession.
9. Play an active role in Environmental awareness, animal rights organizations.

### **COURSE OUTCOMES**

## **B. Sc. First Year; Semester –I**

### **Paper-I: Biodiversity of Invertebrates**

#### **Outcome of the Course:**

1. The student will be able to identify a given invertebrate upto class level.
2. Ability to understand the contribution of Invertebrates in the biodiversity index of any given habitat.
3. Ability to understand and appreciate the ecological and economic importance of invertebrates and vertebrates.
4. Ability to identify and describe external morphology and internal anatomical features of representative invertebrate species.

## **B. Sc. First Year; Semester –I**

### **Paper-II: Biodiversity of Chordates**

#### **Outcome of the Course:**

1. The student will be able to identify and understand the Biodiversity of Chordates.
2. Ability to understand anatomical relation between different vertebrate classes.
3. The learner will be able to understand the economic importance of Chordates.

## **B. Sc. First Year; Semester –II**

### **Paper-III: Comparative Anatomy of Vertebrates**

#### **Outcome of the Course:**

1. The student will be able to identify and understand comparative anatomical structure of organ systems.
2. The learner will be able to understand the evolution of various organs and systems in the vertebrate body according to its environment.
3. Understand the plasticity of organ systems to adapt to the environment and acquire different novel forms.

## **B. Sc. First Year; Semester –II**

### **Paper-IV: Comparative Anatomy of Vertebrates**

#### **Outcome of the Course:**

1. The student will be able to explain the basics processes of vertebrate embryonic development.
2. Ability to describe the various steps in vertebrate development.
3. Identify and explain about the different embryonic structures.

4. Describe the functions of different extra-embryonic structures.
5. Understanding of the Assisted Reproductive Technologies.

### **B. Sc. Second Year; Semester –III**

#### **Paper-VI: Physiology**

##### **Outcome of the Course:**

On successful completion of the course, the students will be able to

1. Monitor their blood pressure and identify blood groups.
2. Understand function and types of heart & circulatory system.
3. Appreciate the basic function of kidney, main function of nerves.
4. Acquire knowledge on the nature and functions of hormones and learn the mechanism of hormone action.
5. Learn the structure and functions of Endocrine glands.
6. Understand the structure, development and function of reproductive organs in human.

### **B. Sc. Second Year; Semester –III**

#### **Paper-VII: Biochemistry**

##### **Outcome of the Course:**

On successful completion of the course, the students will be able to

1. Understand the chemical structure and functions of various biomolecules
2. Learn the signaling of biomolecules in cell membrane.
3. Understand the correlation between metabolism of different types of biomolecules.

### **B. Sc. Second Year; Semester –IV**

#### **Paper-VIII: Cell Biology and Genetics**

##### **Outcome of the Course:**

On successful completion of the course, the students will be able to

1. Understand the structure and function of the cell as the fundamentals for understanding the functioning of all living organisms.
2. Understand structures and various cellular functions associated with the macromolecules found in cells.
3. Acquire knowledge of Mendelian Genetics and its Extension.

4. Graduates will be able to explain and interpret various processes, phenomena, states and evolutionary tendencies at a biological system level.

#### **B. Sc. Second Year; Semester –IV**

##### **Paper-IX: Evolutionary Biology and Genetic Engineering**

###### **Outcome of the Course:**

On successful completion of the course, the students will be able to

1. Understand the theories and concepts of evolution.
2. Learn the process of evolution in animals.
3. Understand the patterns of evolutionary changes in animals.
4. Understand the organization and functions of genetic material in the living world.
5. Understand the Recombinant DNA Technology.

#### **B. Sc. Third Year; Semester –V**

##### **Paper-XII: Ecology and Zoogeography**

###### **Outcome of the Course:**

1. Establish relationship between different groups of organisms in an ecosystem.
2. Appreciate and explain the role of plants, animals and other organisms in a habitat.
3. Evaluate effect of each group of organisms on others.
4. Identify issues with Suggest methods and approaches to improve health of an ailing ecosystem.

#### **B. Sc. Third Year; Semester –V**

##### **Paper-XIII(A): Pisciculture**

###### **Outcome of the Course:**

1. Understanding of taxonomy of fish.
2. Knowledge of feeding methods and habits of fish.
3. Knowledge of general fish anatomy and morphology.
4. Knowledge of hydro-geography of India.

#### **B. Sc. Third Year; Semester –VI**

##### **Paper-XIV: Ethology, Biometry and Bioinformatics**

###### **Outcome of the Course:**

1. Knowledge and understanding of different forms of behavior in animals.

2. Ability to explain and apply basic biometric computation methods.
3. Describe and elaborate about the different software and techniques in bioinformatics.
4. Use different biological databases to retrieve biological information.

## **B. Sc. Third Year; Semester –VI**

### **Paper-XV (A): Aquaculture**

#### **Outcome of the Course:**

1. Knowledge of various types of aquaculture and culture methods and Mariculture.
2. Understanding of fishery science, with a particular focus on the biology, assessment, and management of fish and invertebrate fisheries.
3. Awareness about man-made hazards to aquaculture.
4. Knowledge of role of Larvivorous fishes in relation to public health.
5. Awareness of the role of Government in aquaculture development.