

## OUTCOMES OF T.Y. B.Sc. ZOOLOGY SYLLABUS:

### SEMESTER –V

#### US05CZOO01: INVERTEBRATA

- Students learn about the history of Taxonomy, how animals are classified in different phylum and how their name is given and on which bases.
- By studying various general topics and some type of animals from different phylum, students can understand that how each phylum related to each other and developed from single cell of protozoa to multi-cellular higher animal of Echinodermata
- They can also learn about the anatomy and physiology of different Invertebrate animals.
- This will help them for research and other competitive exam.

#### US05CZOO02: COMPARATIVE ANATOMY OF CHORDATA

- Students can understand that how evolution occurs from Protochordata to higher class of Mammals of vertebrata.
- They learn about Integuments (skin) and their derivatives of different chordate animals.
- They also know about the anatomy of digestive system, lymphatic system, blood vascular system and their circulatory media and evolution of single chambered heart to four chambered heart of mammals.
- By studying above topics students are aware about the anatomy of all classes of Chordates.

#### US05CZOO03: CELL BIOLOGY

- Students can aware about the history, types of light and Electron microscope.
- They also learn about various techniques which is using for studying cell.
- They also learn about the structure and functional aspects of all cell organelles in detailed so they can understand the role of cell.
- This will help them for further studies & research work.

#### US05CZOO04: PHYSIOLOGY

- Students learn about the functional aspects of Human body.
- Students learn that what are the types of muscles we have and how they are working
- They know about the most important Nervous system their structural and functional aspects, like Human brain, cranial and spinal nerves, reflexation etc.
- They also understand about the digestive system & digestion of food.
- They learn about the various endocrine glands, how hormones are playing important role in Human body

#### US05CZOO05: GENETICS

- Students learn about the general account of gene and Mendelism.

- They understand that how different genes are blending and express in different ratio in different generation of animals.
- They also learn about the sex determination, differentiation, gene linkage, crossing over, mutation and Human genetics.

#### US05CZOO06: ENVIRONMENTAL BIOLOGY

- Students can learn about the various types of Ecosystem and how they are linked with each other.
- They also learn about structural and functional aspects of Ecosystem conservation.
- They understand that how our Ecosystem is affected by degradation?
- They aware and understand about the environmental pollution and anthropological global environmental problems.
- This will help them to aware the other common people & conserve the environment.

#### SEMESTER: VI

#### US06CZOO01: VERTEBRATA

- Students can aware about the significance of Protochordates and their linked between lower to higher Chordate animals.
- They learn about the origin of Pisces, Amphibians, Reptiles, Aves and Mammals.
- By studying some general topics and some complete type of animals students can understand the anatomy and physiology of animals from different classes.
- They also learn about the Dinosaurs, aquatic mammals etc.

#### US06CZOO02: COMPARATIVE ANATOMY OF CHORDATA

- By studying this comparative anatomy of respiratory structures of different classes students can understand the evolution of different structures according to their habit.
- They also learn about the connection of excretory and reproductive system of various classes.
- They also know about the evolution of brain and types of sensory receptors and by this they understand the responses of animals.
- By studying about comparative anatomy of endocrine glands students can understand the evolution of glands and their role in different animals.

#### US06CZOO03: EVOLUTION AND APPLIED ZOOLOGY

- Students know about organic evolution, how Earth is originated and how life begins on Earth by various evidences and theories.
- They also understand about the Fishery and their products, Poultry, Dairy industry and some pharmaceuticals from animals which help them to establishment of this type of industries and earn the money.

#### US06CZOO04: DEVELOPMENTAL BIOLOGY

- By studying about Parthenogenesis students can understand that how without fertilization, development of animals occurs and they maintain their existence in adverse condition too.
- They also learn that genesis of ova and sperms, types of eggs and their covering.
- By studying development of Amphioxus, Frog and Chick they know about the different stages of embryology like, cleavage, blastulation, gastrulation, organogenesis and development of larva to convert young animals.
- This knowledge helps them for future embryological experiment and development of different organs too.

#### US06CZOO05: BIOTECHNOLOGY

- Students learn detailed of genetic material and their role,
- They learned about various techniques which is very much important in biotechnology.
- They also learn about tissue culture, IVF technology and gene transfer too.
- They understand about transgenic animals and how biotechnology is used for production of different medicine and Cancer too.

#### US06CZOO06: WILD LIFE AND ANIMAL BEHAVIOUR

- Students aware about National Parks and Sanctuaries.
- They also understand about Wild life management and conservation of wild life.
- They also learned about endangered species and related projects.
- They also know about diversity of India.
- They understand the different behavior of animals and parental care of Fishes and Amphibians.
- This help them protect our wild life and save them.