

## DISCIPLINE SPECIFIC CORE COURSE

### BZO: C201 ANIMAL DIVERSITY: CHORDATA

(Credits: Theory-4, Practicals-2)

#### SEMESTER –II

Lectures: 60

##### Unit 1

Introduction and Origin of Chordata

General characteristics and outline classification, Dipleurula concept and the Echinoderm theory of origin of chordates

##### Unit 2

Protochordata and Agnatha

General characteristics of Hemichordata, Urochordata and Cephalochordata; Study of larval forms in protochordates; Retrogressive metamorphosis in Urochordata, General features of Agnatha and classification of cyclostomes up to classes

##### Unit 3

Pisces and Amphibia

General characteristics of Chondrichthyes and Osteichthyes, Classification up to order

Migration, Osmoregulation and Swim bladder in Fish, Origin of Tetrapoda (Evolution of terrestrial ectotherms); General characteristics and classification up to order; Parental care in Fishes and Amphibians

##### Unit 4

Reptilia and Aves

General features and Classification up to orders; Poisonous and nonpoisonous snakes, Biting mechanism in snakes, General characteristics and classification up to order; Flight adaptations and migration in birds

##### Unit 5

Mammalia

General characters and classification up to order; Affinities of Prototheria; Adaptive radiation with reference to locomotory appendages

#### SUGGESTED READINGS

1. Young, J. Z. (2004). *The Life of Vertebrates*. III Edition. Oxford university press.
2. Pough H. *Vertebrate life*, VIII Edition, Pearson International.
3. Hall B.K. and Hallgrimsson B. (2008). *Strickberger's Evolution*. IV Edition. Jones and Bartlett Publishers Inc.

**BZO: P251 Lab Course**

Protochordata: *Balanoglossus*, *Herdmania*, *Branchiostoma*

Agnatha: *Petromyzon*

Pisces: *Sphyrna*, *Pristis*, *Torpedo*, *Labeo*, *Exocoetus*, *Anguilla*

Amphibia: *Ichthyophis/Ureotyphlus*, *Salamandra*, *Bufo*, *Hyla*

Reptilia: *Chelone*, *Hemidactylus*, *Chamaeleon*, *Draco*, *Vipera*, *Naja*, *Crocodylus*, *Gavialis*

Key for Identification of poisonous and non-poisonous snakes

Aves: Study of six common birds from different orders

Mammalia: *Sorex*, Bat, *Funambulus*, *Loris*

An "animal album" containing photographs, cut outs, with appropriate write up about the above mentioned taxa. Different taxa/ topics may be given to different sets of students for this purpose. These need not be repeated as drawings by the album maker.

---