

## PANJAB UNIVERSITY, CHANDIGARH

### B.Sc.–IIInd year Examination

#### SEMESTER–III

#### (ZOOLOGY)

#### UNIT-I

- Chordates – Origin, Parental care and Migration.
- Protochordates – Urochordata – Type study–*Herdmania* (Except development)
- Cephalochordata – Type study–*Amphioxus*. (Except development)
- Classification of animals upto orders relating to the following groups along with brief ecological notes of the following:  
Photochordates – *Herdmania*, *Molgula*, *Pyrosoma*, *Doliolum*, *Salpa*, *Oikopleura* and *Branchiostoma* (excluding development).

#### UNIT-II

- Cyclostomata – External characters of *Petromyzon* and affinities of cyclostomata.
- Pisces – Scales and Fins, – Type study–*Labeo*.  
Osmoregulation  
Cyclostomata – *Myxine*, *Petromyzon* and *Ammocoetes* larva.  
Chondrichthyes – *Zygaena* (Hammer-headed shark). *Pristis* (Saw fish), *Narcine* (Electric ray), *Trygon*, *Rhinobatus* and *Chimaera* (rabbit fish).
- Actinopterygii – *Polypterus*, *Acipenser*, *Lepisosteus*, *Muraena*, *Mystus*, *Catla*, *Hippocampus*, *Syngnathus*, *Exocoetus*, *Anabas*, *Diodon*, *Tetradon*, *Echeneis* and *Solea*.
- Dipneusti (Dipnoi) – *Protopterus* (lung fish)

#### UNIT-III

- Amphibia – Type study–*Hoplobatrachus Tigerinus*
- Classification of animals upto orders relating to the following groups along with brief ecological notes of the following:  
Amphibia : *Uraeotyphlus*, *Necturus*, *Amphiuma*, *Amblystoma* and its *Axolotl larva*, *Triton*, *Salamandra*, *Hyla* and *Rhacophorus*.

#### UNIT-IV

- Concept and Evidences of Organic Evolution.
- Theories of Organic Evolution.
- Origin of Life.