

B.Sc. Part-II

Paper-III : PRACTICAL

Max. Marks : 100
Time allowed : 6 Hours
(2 Sessions M&E)

1. Classification upto orders, habit, habitats, external characters and economic importance (if any) of the following animals:-

Protochordata :	<i>Molgula, Heteryllus, Pyrosoma, Doliolum, Oikopleura</i> , and <i>Amphioxus</i> .
Cyclostomata :	<i>Myxine, Petromyzon</i> and <i>Amphicoetus larva</i> .
Chondrichthyes :	<i>Zygaena, Pristis, Narcine</i> (electric ray), <i>Trygon, Rhinobatus, Raja</i> and <i>Chimaera</i> .
Osteichthyes :	<i>Acipenser, Lepidosteus, Muraena, Mystus, Catla, Hippocampus, Syngnathus, Exocoetus, Anabas, Diodon, Ostracion, Tetradon, Echinus, Lophius, Solea</i> and <i>Polypterus</i> . Any of the Lung Fishes.
Amphibia :	<i>Necturus, Proteus, Amphiuma, Salamandra, Amblystoma, Axolotie larva, Alytes, Bufo, Rana</i> .
Reptilia :	<i>Hemidactylus, Calotes, Draco, Varanus, Phrynosoma, Chamaeleon, Typhlops, Python, Eryx, Ptyas, Bungarus, Naja, Hydrus, Viper, Crocodilus, Gavialis, Chelone</i> (Turtle) and <i>Testudo</i> (Tortoise).
Aves :	<i>Casuaris, Arden, Anas, Milvus, Pavo, Eudynamis, Tyto</i> and <i>Alcedo, Halcyon</i> .
Mammalia :	<i>Ornithorhynchus, Echidna, Didelphis, Macropus, Loris, Macaque, Hystrix, Funambulus, Telix, Panthera, Canis, Herpestes, Capra, Pteropus</i> .

2. Internal anatomy of the following animals:

- (i) Computer simulated model/study of :

(a) <i>Herdmania</i>	:	General anatomy
(b) <i>Rat</i>	:	Digestive, arterial, venous and urinogenital systems.
(c) <i>Hemidactylus</i>	:	Digestive, arterial, venous and urinogenital systems

- (ii) Demonstration & Study of Internal Anatomy of locally available fish (*Labeo*). Digestive and reproductive systems: cranial nerves, Ear ossicle

3. Study of the skeleton of *Scoliodon, Labeo, Rana* (Frog), *Varanus*, Pigeon or Gallus and *Oryctolagus*/rat. Palates of birds, skulls of dog & rabbit.
4. Study of the following prepared slides:
Tornaria larva, T.S. Amphioxus (through different regions), *Oikopleura*, Histology of rat (compound tissues), different types of scales.

5. Make permanent stained preparations of the following:
Salpa, Spicules, and Pharynx of *Herdmania*, *Amphioxus*, Cycloid scales. Zoological excursion
and its report is compulsory in the practical examination.

PHYSIOLOGY PRACTICALS:

1. Qualitative tests for identification of simple sugars, disaccharides and polysaccharides.
2. Study of human salivary amylase activity: Effect of temperature, pH, Concentration.
3. Estimation of abnormal constituents of urine (Albumin, sugar, ketonebodies).
4. Use of Kymograph unit & respirometer.
5. Haematein crystal preparation.
6. Estimation of Hb.
7. DLC of Man/RBC count/WBC count.