

## SEMESTER- I

### Core Course: Zoology: DSC-01

#### BZO-C 101: ANIMAL DIVERSITY

(Credits: Theory-4, Practicals-4)

#### THEORY

Lectures: 60

M.M.: 70

#### UNIT-I

**Phylums: Protista:** General characters and classification up to classes; Locomotory Organelles and locomotion in Protozoa: **Porifera:** General characters and classification up to classes; Canal System in *Sycon*: **Cnidaria:** General characters and classification up to classes; Polymorphism in Hydrozo: **Platyhelminthes:** General characters and classification up to classes; Life history of *Taenia solium*: (12 Lectures)

#### UNIT-II

**Phylums: Nematelminthes:** General characters and classification up to classes; Life history of *Ascaris lumbricoides* and its parasitic adaptations: **Annelida:** General characters and classification up to classes; Metamerism in Annelida: **Arthropoda:** General characters and classification up to classes; Vision in Arthropoda, Metamorphosis in Insects. (12 Lectures)

#### UNIT-III

**Phylums: Mollusca:** General characters and classification up to classes; Torsion in Gastropods: **Echinodermata:** General characters and classification up to classes Water-vascular system in Asteroidea: **Protochordates:** General features and Phylogeny of Protochordata: (12 Lectures)

#### UNIT-IV

**Agnatha:** General features of Agnatha and classification of cyclostomes up to classes  
**Phylums: Pisces:** General features and Classification up to orders; Osmoregulation:  
**Amphibia:** General features and Classification up to orders; Parental care. (12 Lectures)

#### UNIT-IV

**Reptiles:** General features and Classification up to orders; Poisonous and nonpoisonous, snakes, Biting mechanism in snakes: **Aves:** General features and Classification up to orders; Flight adaptations: **Mammals:** Classification up to orders; Origin of mammals. (12 Lectures)

**Note:** The question paper shall consist of two sections (A & B). Section A shall contain ten short answer type questions of six marks each and student has to attempt any five questions in about 150 words each. Section B shall consist eight long answer type questions of ten marks each and student shall be required to attempt any four questions in detail. Questions shall be uniformly distributed from the entire syllabus. The previous year paper can be used as a guideline and the following syllabus should be strictly followed while setting the question paper.

## **SUGGESTED READINGS**

1. Barnes, R.D. (1982). *Invertebrate Zoology*, V Edition. Holt Saunders International Edition.
2. Barnes, R.S.K., Calow, P., Olive, P.J.W., Golding, D.W. and Spicer, J.I. (2002). *The Invertebrates: A New Synthesis*, III Edition, Blackwell Science
3. Barrington, E.J.W. (1979). *Invertebrate Structure and Functions*. II Edition, E.L.B.S. and Nelson
4. Young, J. Z. (2004). *The Life of Vertebrates*. III Edition. Oxford university press.
5. Pough H. *Vertebrate life*, VIII Edition, Pearson International.
6. Hall B.K. and Hallgrímsson B. (2008). *Strickberger's Evolution*. IV Edition. Jones and Bartlett Publishers Inc.

## PRACTICAL: BZO-C 151

M.M.:70

**Kingdom: Protista:** *Amoeba, Euglena, Plasmodium, Paramecium*

**Phylum: Porifera:** *Sycon* (including T.S. and L.S.), *Hyalonema*, and *Euplectella*

**Phylum: Cnidaria:** *Obelia, Physalia, Aurelia, Tubipora, Metridium*

**Phylum: Platyhelminthes:** *Taenia solium* and Study of its life history stages

**Phylum: Nematelminthes:** Male and female *Ascaris lumbricoides*

**Phylum: Annelida:** *Aphrodite, Nereis, Pheretima, Hirudinaria*

**Phylum: Arthropoda:** *Palaemon, Cancer, Limulus, Palamnaeus, Scolopendra, Julus, Periplaneta, Apis*

**Phylum: Mollusca:** *Chiton, Dentalium, Pila, Unio, Loligo, Sepia, Octopus*

**Phylum: Echinodermata:** *Pentaceros, Ophiura, Echinus, Cucumaria* and *Antedon*

**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.