

DISCIPLINE SPECIFIC CORE COURSE
BZO:C101 ANIMAL DIVERSITY: NONCHORDATA
(Credits: Theory-4, Practical-2)

SEMESTER –I

Lectures: 60

Unit 1

Phylum -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*

Unit 2

Cnidaria: General characters and classification up to classes; Polymorphism in Hydrozoa; Platyhelminthes: General characters and classification up to classes; Life history of *Taenia solium*

Unit 3

Phylum: 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

Unit 4

Arthropoda: General characters and classification up to classes; Vision in Arthropoda, Metamorphosis in Insects Phylum: Mollusca: General characters and classification up to classes; Torsion in Gastropods:

Unit 5

Echinodermata: General characters and classification up to classes, Water-vascular system in Asterozoa: Protochordates: General features and Phylogeny of Protochordata

Note: Classification to be followed from "Barnes, R.D. (1982). *Invertebrate Zoology*, V Edition."

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 Hallgrimsson B. (2008). *Strickberger's Evolution*. IV Edition. Jones and Bartlett Publishers Inc.

Lab Course BZO: P151

1. Kingdom: Protista: *Amoeba*, *Euglena*, *Plasmodium*, *Paramecium*
2. Phylum: Porifera: *Sycon* (including T.S. and L.S.), *Hyalonema*, and *Euplectella*
3. Phylum: Cnidaria: *Obelia*, *Physalia*, *Aurelia*, *Tubipora*, *Metridium*
4. Phylum: Platyhelminthes: *Taenia solium* and Study of its life history stages
5. Phylum: Nematelminthes: Male and female *Ascaris lumbricoides*
6. Phylum: Annelida: *Aphrodite*, *Nereis*, *Pheretima*, *Hirudinaria*
7. Phylum: Arthropoda: *Palaemon*, *Cancer*, *Limulus*, *Palamnaeus*, *Scolopendra*, *Julus*, *Periplaneta*, *Apis*
8. Phylum: Mollusca: *Chiton*, *Dentalium*, *Pila*, *Unio*, *Loligo*, *Sepia*, *Octopus*
9. Phylum: Echinodermata: *Pentaceros*, *Ophiura*, *Echinus*, *Cucumaria* and *Antedon*
10. Take water from ponds and identify different genera of invertebrates

An "animal album" containing photographs, cut outs, with appropriate write up about the abovementioned 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.