

ZOOLOGY SEMESTER 1ST
CORE COURSE I

ANIMAL DIVERSITY

THEORY

(CREDITS 4)

Unit 1

1.1 Protista

General characters and classification up to classes; Locomotion in Protozoa

1.2 Porifera

General characters and classification up to classes; Canal System

1.3 Cnidaria

General characters and classification up to classes; Polymorphism in Hydrozoa

1.4 Helminthes

General characters and classification up to classes of platyhelminthes and nemathelminthes; Life history of *Taenia solium* and *Ascaris lumbricoides*; parasitic adaptations

Unit 2

2.1 Annelida

General characters and classification up to classes; Filter feeding in Polychaetes

2.2 Arthropoda

General characters and classification up to classes; Vision in Arthropoda, Metamorphosis in Insects

2.3 Mollusca

General characters and classification up to classes; Torsion in gastropods

2.4 Echinodermata

General characters and classification up to classes; Water-vascular system in Asteroidea

Unit 3

3.1 Urochordates

General features and classification; Phylogeny of Protochordata

3.2 Cephalochordates

General features and classification

3.3 Agnatha

General features of Agnatha and classification of cyclostomes up to classes

3.4 Pisces

General features and Classification up to orders; Osmoregulation

Unit 4

4.1 Amphibia

General features and Classification up to orders; Parental care

4.2 Reptiles

General features and Classification up to orders; Poisonous and non-poisonous snakes

4.3 Aves

General features and Classification up to orders; Flight adaptations

4.4 Mammals

General characters and Classification up to orders; adaptive radiation

ANIMAL DIVERSITY

PRACTICAL

(CREDITS 2)

1. Study of the museum specimens belonging to all the phyla (available in respective museums).
2. Dissection of following animals to expose different systems:
 - Pheritima
 - Prawn
 - Pila
3. Study of the following permanent slides:
 - T.S. and L.S. of *Sycon*
 - Life history stages of *Taenia*
 - T.S. of Male and female *Ascaris*
4. Key for Identification of poisonous and non-poisonous snakes

SUGGESTED READINGS

- Ruppert and Barnes, R.D. (2006). *Invertebrate Zoology*, VIII Edition. Holt Saunders International Edition.
- 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
- Young, J. Z. (2004). *The Life of Vertebrates*. III Edition. Oxford university press.
- Pough H. *Vertebrate life*, VIII Edition, Pearson International.
- Hall B.K. and Hallgrimsson B. (2008). *Strickberger's Evolution*. IV Edition. Jones and Bartlett Publishers Inc.
- Jordan, E.L. ,Verma,P.S., (2013) *Chordate Zoology*, S Chand &Company, New Delhi