

Department of Zoology

Minor Elective Paper for PG Students

Programme Name and Code: Zoology

Course code and Name: ZOOL EP1 – Introduction to Zoology

MM: 25+75=100

Objectives:

- To provide a brief introduction about the animal world.
- To know the basic mechanisms of life.
- To explore the entrepreneurship opportunity in zoology.

Unit I: Animal Diversity

Classification of living organism

Non-chordata: General characters and classification (up to class) of phylum- Protozoa, Porifera, Coelenterata, Platyhelminthes, Aschelminthes, Annelida, Arthropoda, Mollusca and Echinodermata

Chordata: Classification of chordata upto classes

General characters of the classes- Pisces (Fishes) , Amphibia, Reptilia, Aves (Birds) and Mammalia

Unit II: Animal Physiology

Brief Introduction of Digestive System, Respiratory system, Nervous System, Excretory system and Endocrine System

Unit III: Cell Biology and Genetics

Cell Theory, Prokaryotic and Eukaryotic Cells, Endoplasmic reticulum, Golgi Complex, Lysosome and Mitochondria, Mendel's laws of genetics, Chromosomal Aberration.

Unit IV: Evolution and Economic Zoology

General concept of evolution and Darwinism

Apiculture, Sericulture, Pests of Economic importance

Suggested Readings:

1. Barnes et al (2009). The Invertebrates: A synthesis. Wiley Backwell 17
2. Brusca and Brusca (2016) Invertebrates. Sinauer

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3. Kotpal R.L, Modern Text Book of Zoology: Invertebrates (2012)
4. Kotpal R.L, Modern Text Book of Zoology: Vertebrates (2010)
5. Khanna. S.S, (2018) An introduction to fishes
6. Sericulture for Rural Development : Hanumappa (1978), Himalaya Publication,
7. 6.. Sriculture in India Sarkar, D.C. (1988), CSB, Bangalore
8. Young: The Life of vertebrates (3rd ed 2006, ELBS/Oxford)
9. Cooper: Cell: A Molecular Approach: ASM Press (2000).
10. Benjamin A P. Genetics: Conceptual Approach (2019).
11. Tortora, G.J. & Grabowski, S. Principles of Anatomy & Physiology. XI Edition John Wiley & sons (2006).
12. Hill, Richard W., et al. Animal physiology. Vol. 2. Sunderland, MA: Sinauer Associates, (2004).
13. Chatterjee C, Human Physiology Volume 1 & 2. 11th edition. CBS Publishers(2016).

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