

# BS23MJ1ZO1

## Shri Govind Guru University, Godhara

### B.Sc. Zoology Semester I Theory Major Paper I

#### Title: Nonchordates, Animal Diversity, Cytology and Genetics

(Credit 04)

#### Unit I : Non chordates I and Animals Diversity.

A. Salient features & classification starting from Protista / Protozoa to Annelida giving suitable examples (As per practical syllabus).

B. Type Study Hydra - Systematic position, Habits, habitat, External Characters, Histology of Body wall, Nerve net, Reproduction and life cycle.

#### Unit II : Animal diversity (Nonchordates)

Type Study Earthworm (*Pheretima posthuma*)- classification, Habits & Habitat, External characters, Body wall, Digestive system, circulatory system, Excretory system, Nervous system, Reproductive system and Reproduction.

#### Unit III : Cytology – I.

A. Ultra Structure of a typical Animal cell, Nucleus, Mitochondria, ER, Eukaryotic Ribosomes.

B. Light Microscopes - 1) Simple 2) Compound

#### Unit IV : Genetics – I

Introduction to genetics and gene.

Mendel's Law of Heredity

Incomplete dominance, Codominance, multiple alleles – ABO Blood groups, Polygenic

Inheritance (Skin color in man)

Lethal Genes-coat color in Rat

#### REFERENCES:

1. A Manual of Zoology Vol. I & II, Ekambarnath Ayyar and Ananthakrishnan, Viswanthan Pvt. Ltd. Madras.
2. Biology of Animals, C. P. Hickman, L. S. Roberts, and A. Larson, McGrawHill Company, New York.
3. Biology of the Invertebrates, J. A. Pechenik, Tata-McGraw Hill Company, Ltd, New Delhi.
4. Integrated principals of Zoology, C. P. Hickman, L. S. Roberts, and A. Larson, McGraw Hill Company, New York.

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## **B.Sc Zoology Semester I**

5. Invertebrate Zoology Jordan, E. L. and Verma, P.S, S. Chand & Co. NewDelhi.
6. Invertebrate Zoology Dhami,P.S. and Dhami,J.K., S Chand & Co. Delhi.
7. Invertebrate Zoology R.L.Kotpal Rastogi Publications, Meerut- New Delhi.
8. Biology of Animals, C. P. Hickman, L. S. Roberts, and A. Larson, McGrawHill Company, New York.
9. Cell Biology and Molecular Biology, N. Arumugan, Saras Publications.
10. Cytology P.K.Gupta., S Chand & Co. Delhi.
11. Fundamental of Light Microscopy & Electron Imaging. Murphy D.B.,Wiley Liss.
12. Genetics, P.S. Verma & V.K. Agarwal, S.Chand & Co. Delhi.
13. Fundamentals of Genetics B.D.singh., Medtech Science Press.