

BHARATHIAR UNIVERSITY : COIMBATORE – 641 046

Allied Zoology Paper –I

ANIMAL DIVERSITY AND ORGANIZATION

Total Hours : 60
Per Week : 4

Objective : To acquire a basic knowledge of animal diversity and its organization

Unit – I Diversity of Invertebrates –I

General characters of protozoa, coelenterate, Helminthes and Annelida.
Type Study – Paramecium
General Essay – Parasitic Adaptation of Helminthes

Unit – II Diversity of Invertebrates –I

General Characters of Arthropoda, Mollusca and Echinodermata.
Type Study – Cockroach
General Essay – Economic importance of Mollusca

Unit – III Diversity of Chordates – I

General characters of Prochordates, Pisces & Amphibia.
Type Study – Frog (except endoskeletal system)

Unit – IV Diversity of Chordates – I

General Characters of Reptilia & Aves.
Type Study – Calotes (except endoskeletal system)

Unit – V Diversity of Chordates – I

General characters of Mammalia
Type Study – Rabbit (except endoskeletal system)

Books for study :

1. Ekambaranatha Ayyer “ Out lives of Zoology” S.Viswanathan, Chennai.

Books for reference :

1. Jorden EH & P.S.Verma Invertebrate Zoology, S.Chand & Co.

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Allied Zoology Paper –II

GENERAL PRINCIPLES OF ZOOLOGY

- Unit – I** Carbohydrates – Classification & Structure
Protein – Classification and Structure
Fat – Classification and structure
Classification of enzymes – Mechanism of enzyme action
- Unit – II** Respiration – Respiratory pigments and transport of gases mechanism of Blood Clotting, Types of excretory products – Ornithine cycle, Conduction of Nerve impulse.
- Unit – III** Types of Verbrate eggs, cleavage, pattern, Blastulation and gastrulation in frog.
- Unit – IV** Structure of animal cell – DNA as a genetic material, structure – application of DNA Genetic Code – Protein synthesis – Molecular basis of Mutation - Tautamarization & base Analog method.
- Unit – V** Structure classification and culture of virus – Viral disease AIDS – structure of Bacteria, Classification – Bacterial disease – Cholera – Typhoid – Recombinant DNA technology.

Books for study :

1. N.Arumugan Physiology Gen. Comparative, Saras Publication., Nagarcoil.
2. Hoar S.William . Physiology
3. Ambika Shanmugam Biochemistry
4. N.Arumugam Microbiology, Saras Publication.
5. Verma.P.S.Agawal – Developmental Biology S.Chand & Co.,

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ALLIED ZOOLOGY PRACTICAL

Dissection Practical to be completely removed as it is unethical and against conservation rules to kill animals.

Hence, virtual dissections using computer aided programmes to be introduced.

DISSECTION

Fish : Digestive system

Mounting : Scales of Fishes

Cockroach : Mouth Parts, Digestive systems, Nervous systems and Reproductive system

SPOTTERS

Paramecium entire, Conjugation, Obelia Colony.
Medusa, Liver fluke, Ascarais, Earthworm, Pila
Starfish, Amphioxus, Shark, Skeleton of frog
Quill feather, Mitosis stages, Frog
Egg – Blastula – Gastrula.