

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

Principles of Taxonomy – Criteria for classification – Symmetry and coelom-
Binomial nomenclature classification of protozoa, coelenterate, Helminthes and
Annelid upto classes with two examples.

Unit – II Diversity of Invertebrates –I

Classification of Arthropoda, Mollusca and Echinodermata upto classes level with
examples.

Unit – III Diversity of Chordates – I

Classification of Prochordates, Pisces, Amphibia upto orders giving two examples.

Unit – IV Diversity of Chordates – I

Classification of Reptilia, Aves & Mammalia upto orders giving two examples.

Unit – V Animal organisation

Structure and organization of in (i). Cockroach (ii). Frog

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., Nagarcovil.
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 Practicals 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

Frog : Digestive system , Arterial, Venous system , Urinogential system

Mounting : Brain of Frog

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.