

Biology II (Semester 3)

Animal Diversity

Introduction

Taxonomy and evolutionary relationship of organisms. Patterns of organization.

Kingdom Protista

Characters and classification of Protista. Structure, functions of pseudopodia, flagella, and cilia. Parasitic protozoans.

Kingdom Animalia

- Phylum Porifera: Characters and classification, water vascular system.
- Phylum Cnidaria: Characters and classification, Body wall, Alternation of generation.
- Phylum Platyhelminthes: Characters and classification, Parasitic helminthes.
- Phylum Aschelminthes: Characters and classification, Nematod parasites.
- Phylum Mollusca: Characters and classification, Reproduction, Economic importance.
- Phylum Annelida: Characters and classification, Metamerism.
- Phylum Arthropoda: Characters and classification, Metamorphosis, Economic importance.
- Phylum Echinodermata: Characters and classification, relationship to other organisms.
- Hemichordata and Protochordata: Evolutionary perspective, Characters and classification.
- Vertebrate diversity: Evolutionary perspective, Characters and classification of fishes,
- Amphibians, Reptiles, Aves and Mammals. Gas exchange and osmoregulation in fishes,
- Adaptive radiation in reptiles, migration in birds, Adaptations and reproduction in mammals.

Practical

Study of representatives of Protista, Porifera, Cnidaria, Platyhelminthes, Aschelminthes, Mollusca, Annelida, Arthropoda, Echinodermata, Hemichordata and Protochordata, Cyclostomata, Pisces, Amphibia, Reptilia, Aves and Mammalia.

Books Recommended:

- Hickman, C. Jr., Keen, S., Larson, A., Eisenhour, D., Ansen, H., & Roberts, L. (2014). Integrated Principles of Zoology. 16th Edition (International). Singapore: McGraw Hill Inc. New York.
- Kent, G. C. & Miller, S. (2001). Comparative anatomy of vertebrates. McGraw Hill Inc. New York.
- Miller, S. A. & Harley, j. B. (2000). Zoology. 5th Edition (International). Singapore, McGraw Hill Inc. New York.
- Pechenik, J. A. (2000). Biology of Invertebrates. 4th Edition (International). Singapore, McGraw Hill Inc.