

Proposed Syllabus For F Y B Sc : Zoology

SNDT UNIVERSITY

Zoology Course 1.01

ANIMAL DIVERSITY AND PHYSIOLOGY

2 CREDITS

Objectives

- To study the invertebrate classification.
- To understand some of the specialized features of each invertebrate phylum
- To get a basic knowledge of the working of the various physiological systems within the animal kingdom.

UNIT I: DIVERSITY OF ANIMAL KINGDOM - I

(15 Lectures)

General characteristics upto classes with examples:

Phylum – Protozoa – Skeleton and Reproduction in Protozoa

Phylum – Porifera – Spicules, Canal system and Reproduction in Poriferan

Phylum – Coelenterata – Polymorphism, Corals and Coral reefs in Coelenterata

Phylum – Platyhelminthes – Parasitic adaptations in Helminthes

Phylum – Aschelminthes – Life cycle of Ascaris

Phylum – Annelida – Reproduction in Annelida

Phylum – Arthropoda - Metamorphosis in insects

Phylum – Mollusca – Foot and Shell in Mollusca

Phylum – Echinodermata – Water Vascular System in Starfish

UNIT II: BASIC ANIMAL PHYSIOLOGY

(15 Lectures)

Locomotion – Cilia, Flagella, Pseudopodia, Parapodia, Striated Muscle Fiber

Nutrition – Modes of Nutrition, Intracellular and Extracellular Digestion, Incomplete and Complete Digestion

Excretion – Contractile Vacuole, Nephridium, Flame cells, Antennary Gland, Nephron

Circulation – Open, Closed Single and Double Circulation, Types of hearts based on structure and function

Respiration – Skin, Gills and Lungs

Nervous System – Nerve Plexus, Structure of neuron, Mammalian Brain

Reproduction – Hermaphroditism, Asexual and Sexual Reproduction, Parthenogenesis