

Bio – 204 General biology (Core)

Objectives

- 1) To impart basic understanding of biology and introduction to living beings and plants.
- 2) To introduce basic topics like cell structure and cell division process.
- 3) To impart knowledge about morphology of typical flowering plant and plant physiology.

Unit – 1

A) General Biology

- Introduction and scope of biology
- Cell plant cell, animal cells its structure and difference between the two.
- Cell Division.

B) Morphology

- Morphology of typical flowering plant.
- Flower its structure and function, fertilization and pollination.
- Root, types of root, modification for special function.

Unit – 2

A) Stem and leaf

- Function of stem, modification for special function.
- Leaf its parts function and types of leaf.
- Modification of leaf for special functions.

B) Seed fruit

- Seed, structure of monocot and disco seed.
- Seed germination and its types.
- Fruit:- types of fruit.

Unit – 3

(A) Plants

- Classification of plants kingdom.
- Plant tissue

(B) Plant physiology

- Osmosis and plasmolysis
- Photosynthesis
- Respiration

Unit – 4

(A) Animal classification

- Classification of animal kingdom
- Study of different phylum's
- Body organization in animals

(B) Animal tissue

- study of epithelial tissue
- study of connective tissue
- study of nervous tissue

Practical

- 1) Study of compound microscope.
- 2) Study of typical flowering plants.
- 3) Study of flower
- 4) Study of plant tissue
- 5) Study of animal tissue
- 6) Classification of plant kingdom
- 7) Identification of different worms
- 8) Identification of different insects
- 9) T.S. of sunflower stem, sunflower root
- 10) T.S. of maize stem
- 11) Preparation of onion cell slide.

Reference books:

- 1) Botany – A C Dutta
- 2) Text book of Gujarat Secondary Board.