

UNIT I

Botany as a Science, Living Systems, Plants parts and their functions, Introduction to plant kingdom, Classification of plant.

UNIT II

Plant vegetative organs: Plant body, the leaf, the stem, the root Plant reproductive organs: flower-pollination, Meiosis & fertilization; fruit & its development, seed & its germination

UNIT III

Vegetative Reproduction-Type, Vegetative structure, Natural and Artificial vegetative reproduction, example of cultivated crops; Sexual Reproduction- the Flower, the Seed and germination, the Fruit

UNIT IV

Economic and Agriculturally important of crop plants: Cereals, pulses and oilseeds, vegetables, spices and condiments, fruits and nuts; fiber yielding plants, forage crop plants;

UNIT V

Industrially important plants: Sugar, starch and cellulose plants; fumitory and masticatory plants; beverages, dyes ad tannins, gums and resins, rubber; drug plants – medicinal plants, plant insecticides, wood and timber plants.

Practical

1. Taxonomic status of food plants, Industrial plants and drug plants and its uses.
2. Study Floral Morphology of important plants.
3. Agricultural and Industrial uses of plants.
4. Preparation of micro slides and identification of various stages of meiosis
5. Preparation of micro slides and identification of various stages of mitosis
6. Propagation of Plants
7. Study of families –Dicots: Fabaceae, Apiaceae, Malvaceae, Solanaceae, Asteraceae, Euphorbiaceae, Cucubitaceae;
8. Study of families –Monocots: Poaceae, Liliaceae

Reference Books

1. Harris, N. and K. J. Oparka. 1994. Plant Cell Biology: A Practical Approach. IRL Press at University Press, Oxford. UK.
2. Verma, P. S. and V. K. Agrawal. 2004. Cell Biology, Genetics, Molecular Biology, Evolution and Ecology. S. Chand & Company Ltd., New Delhi.
3. Vimlesh Pillai, 2007, An Introduction to Botany, ABD Publisher
4. Gupta, P.K. 1999. Genetics. Rastogi Publications, Shivaji Road, Meerut-250002 India