

OPEN COURSE –I (A)

HORTICULTURE

Course code : BO1551.1, Number of credits : 2

Number of contact hours : Lecture: 54 hrs

Aim of the course: To develop knowledge about principles of gardening, propagation and flower arrangement

Objectives:

- # To introduce horticultural methods
- # To familiarize propagation methods in plants.
- # To study types of gardens and flower arrangements

MODULE–I 10hrs

1. Introduction
2. Divisions of horticulture
3. Importance and scope of horticulture.
4. Principles of garden making
5. Types of pots and containers
6. Potting mixture and potting media – soil, sand, peat, sphagnum moss, vermiculite
7. Soil types, Soil preparation
8. Irrigation methods- drip irrigation and sprinkler irrigation
9. Hydroponics

MODULE–II 12hrs

I Propagation methods

1. Cuttings- root, stem, leaf
2. Layering – Air layering, Ground layering (Tip, Trench and Compound)
3. Budding – T-budding
4. Grafting – Approach grafting, Bridge grafting, whip and tongue grafting.
5. Garden tools and implements
6. Manures and fertilizers
7. Farmyard manure, compost, vermi compost and biofertilizers.
8. Chemical fertilizers –NPK.

9. Time and application of manures and fertilizers.

10. Foliar sprays

MODULE- III 12hrs

1. Components of Garden

2. Lawns and landscaping Trees, shrubs and shrubberies, climbers and creepers

3. Flower beds and borders, ornamental hedges, edges, Drives, roads, walks and paths, Carpet beds, topiary, trophy, rockery

4. Conservatory or green houses, Indoor garden, Roof garden

5. Bonsai

MODULE- IV 12hrs

1. Flower Arrangement

2. Containers and requirements for flower arrangements Free style, Shallow and Mass arrangement

3. Japanese –Ikebana

4. Bouquet and garland making

5. Dry flower arrangement

6. Harvesting Methods- Anthurium and Orchid & Storage

7. Marketing of Fruits, vegetables and flowers

8. Preservation and processing of fruits and vegetables

MODULE- V 8hrs

1. Growth regulators in horticulture

2. Rooting hormones, Growth promoters, Flower induction, Parthenocarpy

3. Common diseases of Mango and Tomato

4. Plant protection- Weedicides, Fungicides, Pesticides

Field Study: Visit to a Botanical garden under the guidance of the teacher is encouraged.

REFERENCES

1. Arora J.S (1990). Introductory Ornamental Horticulture, Kalyani Publications

2. Bailey L.H (1901). The Standard Cyclopaedia of Horticulture Volume 1,2 and 3, Macmillan Publications.

3. Bose T.K and Mukerjee D (1987). Gardening in India, Oxford Book House
4. Chauhan V.S, (1972). Vegetable Production in India, Ram Prasad & Sons
5. Gupta S N (2010) Instant Horticulture, Jain Brothers publishing
6. Kumar N (1989). Introduction to Horticulture, Rajalakshmi Publications
7. Manibhushan Rao K (1991). Text Book of Horticulture, Macmillan Publications
8. Shujnrnoto, (1982). The Essentials of Bonsai, David & Charles, Newton
9. Rajesh Kumar, Kaushal Kumar Misra, (2014) Fundamentals of Horticulture, Biotech publishers
10. Singh J (2017) Fundamentals of Horticulture, Kalyani publishers

Expected outcome

- # Students are familiarized in horticulture implements and methods of gardening
- # Better understanding of commercial horticulture, flower arrangement, cut flowers
- # Can understand about land scaping, fertilizers and Plant protection