

OPEN COURSE - CHOICE - 2: APPLIED BOTANY

CODE: BOT5D02

COURSE OUTCOMES (COs)

By the end of the course, students are expected to:

1. Develop general awareness on applied aspects of Plant science.
2. Realize the role of plants in everyday life.
3. Apply vegetative propagation methods in everyday life.
4. Realize the economic importance of plants

DISTRIBUTION OF TEACHING HOURS (18 hrs/Semester = 1hr/week)

| Sl. No | Subject | Total |
|--------------|---------------------------------------|-----------|
| 1 | Module –I Plant Propagation | 12 |
| 2 | Module – II Steps of growing plants | 12 |
| 3 | Module – III. Botany in Everyday life | 24 |
| 4 | Module – IV. Economic Botany | 6 |
| Total | | 54 |

QUESTION PAPER PATTERN

| Type of questions | No of questions | Total |
|-------------------|-----------------|------------|
| 2 marks | 12 | Ceiling 20 |
| 5 marks | 7 | Ceiling 30 |
| 10 marks | 2 | 1x10 = 10 |
| Total | | 60 |

Module –I Plant Propagation

1. Seed propagation – Seed dormancy, seed treatment, conditions for successful propagation, rising of seed beds, care of seedling, transplanting techniques.
2. Vegetative propagation:

- (a) Cutting (stem, roots)
- (b) Grafting (approach, cleft)
- (c) Budding (T-budding, patch)
- (d) Layering (simple, air)

3. Micro propagation - General account

Module – II Steps of Growing Plants

1. Soil- Composition, Types, Texture, Soil pH, Correcting pH, Humus
2. Pots & Potting – Earthen, Fibre, Polythene bags, Potting mixture, Potting, Depotting, Repotting.
3. Chemical fertilizers: types, application, merits and demerits
4. Organic manure; types, application, merits and demerits
5. Need of water: Irrigation – Surface, spray, drip irrigation, sprinklers.
6. Plant protection: Biological, Physical and mechanical, Chemical, biopesticide

Module – III. Botany in Everyday life

1. Vegetable gardening
2. Mushroom cultivation
3. Vermi composting- technique
4. Biofertilizer Technology
5. Orchid and Anthurium cultivation
6. Creating Bonsai

Module – IV. Economic Botany

1. General account on various plants of economic importance
2. Study the Binomial, Family, Morphology of the useful part of the following plants.

Cereals and Millets – Rice, Wheat

Pulses -Greengram, Bengalgram, Blackgram

Beverages – Coffee, Tea, Cocoa.

Fibre – Coir, Cotton

Timber – Teak, Rose wood, Jack

Spices – Pepper, Ginger, Cardamom

Medicinal – Adhatoda, Phyllanthus, Rauwolfia

Oil- coconut, Gingelly

Ornamental plants of economic importance – Rose, jasmine

Fruit – Mango, Banana

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2. Andriance and Brison. 1971. Propagation Horticultural Plants.
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4. Katyal, S.C., Vegetable growing in India, Oxford, New York.
5. Naik, K.C., South Indian Fruits and their Culture.
6. Chanda, K.L. and Choudhury, B. Ornamental Horticulture in India.
7. Premchand, Agriculture and Forest Pest and their Management, Oxford Publication.
8. George Acquah, Horticulture: Principles and Practices. Pearson Education, Delhi.
9. Prasad, S., and U. Kumar. Green house Management for Horticultural Crops, Agrobios, Jodhpur.
10. Kumar, U.: Methods in Plant Tissue Culture. Agrobios (India), Jodhpur.
11. Kolay, A.K. Basic Concepts of Soil Science. New Age International Publishers, Delhi.
12. Bal, J.S., Fruit growing, Kalyani Publishers, Delhi.
13. Rodgran, M.K. Plant Tissue Culture, Oxford & IBH Publishing Ltd., New Delhi.
14. Nesamony, Oushadha Sasyangal (Medicinal plants), State Institute of Language, Kerala, Trivandrum.
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