ST. JOSEPH’S COLLEGE FOR WOMEN (AUTONOMOUS) VISAKHAPATNAM

III SEMESTER **AGRICULTURE AND RURAL DEVELOPMENT** Time:3hrs/week

HORT282(2) **PRODUCTION TECHNOLOGY FOR ORNAMENTAL CROPS,MEDICINAL AND AROMATIC PLANTS AND LANDSCAPING** Marks:60

w.e.f AJ 2022-2023 **SYLLABUS**

**Objectives**

* To Identify ornamental plants
* To Identify Medicinal and Aromatic Plants.
* To prepare and planting of Medicinal and Aromatic Plants.
* To study about Harvesting and postharvest handling of cut and loose flowers

**Course Outcomes**

At the end of the course, students will be able to

**CO1:** Explain the principles of land scaping and importance of ornamental plants.

**CO2:** Discuss the production technology of different types of ornamental crops.

**CO3:** Examine the production technology of medicinal and aromatic crops.

**CO4:** Discuss the methods of value addition in ornamental, medicinal and aromatic crops.

**Theory**

**UNIT – 1 (6 Hours)**

1. Importance and scope of ornamental crops and landscaping - Landscape uses of trees, shrubs and climbers.

2. Principles of landscaping - Initial approach – Axis – Focal Point – Mass effect – Unity – Space – Divisional Lines – Proportion and Scale – Texture – Time and Light – Tone and Colour – Mobility – Rhythm – Balance – Contract – Harmony- Vista – Style.

3. Production technology of cut flowers under protected conditions -Rose – Introduction- origin and distribution- Classification- Species and varieties- Climate and soil requirements- Propagation – Rootstocks- Stock scion compatibility- Land preparation- planting- Manures and fertilizers- Cultural operations (pruningpinching and mulching) harvesting- Post harvest management- Yield and rose biproducts.

4. Gerbera - Introduction- Origin and distribution- Classification- Species and varieties- Climate and soil requirements- Propagation- Land preparation- PlantingManures and fertilizers- Cultural operations - Defoliation- Soil loosening- Shadinguse of growth regulators- Physiological disorders- Harvesting- Post harvest management and yield.

**UNIT –II (6 Hours)**

1. Carnation - Introduction- Origin and distribution- Classification- Species and varieties- Climate and soil requirements- Propagation- Land preparation- PlantingManures and fertilizers- Cultural operations- (Pinching and disbudding) use of growth regulators- Physiological disorders- Harvesting- Post harvest management and yield.

2. Liliumand Orchids - Introduction- Origin and distribution- Classification- Species and varieties- Climate and soil requirements- Propagation- Land preparationPlanting- Manures and fertilizers- Cultural operations- Use of growth regulatorsPhysiological disorders- Harvesting- Post harvest management and yield.

3. Production technology of cut flowers under open conditions - Gladiolus and Tuberose- Introduction- Origin and distribution- Classification of varieties- Species and varieties- Climate and soil requirements- Propagation- Land preparationPlanting- Manures and fertilizers- Cultural operations- Use of growth regulatorsPhysiological disorders- Harvesting- Post harvest management and yield.

**UNIT –III (6 Hours)**

1. Chrysanthemum - Introduction- Origin and distribution- Classification- Species and varieties- Climate and soil requirements- Propagation- Land preparationPlanting, Manures and fertilizers- Cultural operations- Pinching and disbudding Use of growth regulators- Harvesting- Post harvest management and yield.

2. Loose flowers - Marigold and Jasmine under open conditions - Introduction- Origin and distribution- Species and varieties- F1 hybrids- Cimate and soil requirementsPropagation- Land preparation- Planting- Manures and fertilizers- Cultural operations- Pinching and disbudding - Use of growth regulators- Harvesting- Post harvest management and yield.

3. Medicinal plants – Scope and Importance – Production technology of Asparagus, Aloe, Costus- Botanical name – Family - Origin- Economic part - Introduction – Climate – Soil - Varieties – Propagation – Planting - Manuring - Irrigation Intercultural operations - Harvesting- Yield.

**UNIT –IV (6 Hours)**

1. Periwinkle, Isabgol -Botanical name – Family - Origin - Economic part Introduction – Climate – Soil - Varieties – Propagation – Planting - Manuring Irrigation - Intercultural operations - Harvesting- Yield.

2. Aromatic plants – Importance – Essential oil industry in India – Properties of essential oils – Production technology of Mint and Ocimum - Botanical name – Family - Origin- Economic part - Introduction – Climate – Soil - Varieties – Propagation – Planting - Manuring - Irrigation- Intercultural operations Harvesting - Yield.

3. Lemongrass, Citronella, Palmarosa - Botanical name – Family - Origin- Economic part - Introduction – Climate – Soil - Varieties – Propagation – Planting - Manuring - Irrigation- Intercultural operations - Harvesting- Yield.

**UNIT –V (6 Hours)**

1. Geranium and Vettiver - Botanical name – Family - Origin- Economic part Introduction – Climate – Soil - Varieties – Propagation – Planting - Manuring Irrigation - Intercultural operations - Harvesting- Yield.

2. Processing and value addition in ornamental crops and MAPs produce – Dry flower making - Extraction methods of essential oils.

**References text books**

1. Bose, T.K. 1999. Floriculture and Landscaping. Naya Prakash, Kolkatta.
2. Bose, T.K. and Yadav, L.P. 1992. Commercial Flowers. Naya Prakash, Kolkatta.
3. Randhawa, G.S. and Mukhopadhyaya, A. 1994. Floriculture in India. Allied Publishers Pvt. Ltd., New Delhi
4. Chattopadhyay, S.K. 2007.Commercial Floriculture. Gene-Tech Books, New Delhi
5. Srivastava, H.C.2014. Medicinal and Aromatic Plants. ICAR, New Delh

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