

## SEMESTER - III

### Skill Based Subject -I

#### HERBS AND HEALTH

Instructional Hrs. : 45

Sub. Code : 16BOUS301

Max.Marks:CIA–25;ESE- 75

Credits : 3

**Objectives:** To acquire knowledge of medicinal plants, their medicinal uses and uses of various components of Traditional systems of medicine

**UNIT – I** **9 Hrs.**

**Indigenous Medicinal Systems of India** - Ayurveda – Siddha – Homeopathy – *Unani* - Need to preserve the knowledge of the aforesaid systems.

**UNIT – II** **9 Hrs.**

**Higher plants and their Medicinal Uses** - *Ocimum sanctum* - *Emblica officinalis* – *Aloe vera* - *Vinca rosea* - *Cissus quadrangularis* - *Piper betle* and *Allium sativum*.

**UNIT – III** **9 Hrs.**

**Nutraceutical Fruits & Vegetables** - Tomato – Carrot – Beetroot - Soya Bean – Pomegranate - Jamun and *Grapes*.

**UNIT – IV** **9 Hrs.**

**Plants for Body care** – Tooth Paste - Bath oil - Hair oil – Shampoo and *Herbal Perfumes*.

**UNIT – V** **9 Hrs.**

**Herbal Home Remedies** – Skin Diseases – Skin care compounds – Skin pigmentation – Memory power- Intelligence and *Kidney stone*.

**Note :** Bold and *Italics* denotes Self Study Topics

### **TEXT BOOKS:**

1. **Panda, H.**, “*Hand Book on Herbal Drugs and its Plant Sources*”, National Institute of Industrial Research, Delhi.
2. **Panda, H.**, “*Complete Technology Book on Herbal Perfumes and Cosmetics*”, National Institute of Industrial Research, Delhi.
3. **Gokhale, S.B, Kokale, C.K,Purohit, A.P.**, *Pharmacognosy* , Nirali Prakashan, Pune.

### **REFERENCE BOOKS :**

1. **Acharya Vipul Rao** . “*Herbs that Heal*, Diamond Pocket Books , New Delhi.
2. **Kokate, C.K, Purohit, A and Gokhale, S.R.**, “*Pharmacognosy*”, Nirali Prakashan, Pune, 43<sup>rd</sup> Edition, 2009.

**SEMESTER –V**  
**Elective II - HORTICULTURE AND PLANT BREEDING**

**Instructional Hrs: 45**

**Sub. Code: 15BOUE502**

**Max. Marks: CIA – 25; ESE - 75**

**Credits: 4**

**Objectives:** To provide theoretical and practical aspects of gardening to enable them to be self employed. To give insight into the science of breeding.

**UNIT - I**

**9 Hrs.**

**Introduction**-Scope and division of Horticulture, Nursery structures-Nursery beds, propagating frames, hot beds, green house and glass house. Nursery Management-cutting, layering, grafting, pots, *potting and repotting*

**UNIT - II**

**9 Hrs.**

**Gardening**- Garden styles- Indoor garden-terrarium, Hanging Baskets, bonsai- Outdoor garden- Public Garden, Terrace , Rock and Kitchen garden- Lawn

**UNIT - III**

**9 Hrs.**

**Garden operations:** Garden implements and accessories- planting and transplantation, pinching, disbudding, defoliation, staking, pruning watering, mulching and *topiary* -Organic farming- vermicompost, green manure.

**UNIT - IV**

**9 Hrs.**

**Cut flowers**- commercial floriculture - Cultural practices of rose and *jasmine* - Flowers arrangements-dry, wet and *ikebana*.

**UNIT - V**

**9 Hrs.**

**Plant breeding** - Objectives -Conventional methods – Introduction, Selection – Mass, Pure and clonal, Hybridization Techniques- Types, *Heterosis and hybrid vigour*.

**Note: *Italics* denotes Self Study Topics**

## **PRACTICALS:**

1. Demonstration of vegetative propagation methods.
2. Flower arrangements.
3. Types of garden – kitchen garden, green house
4. Hybridization techniques

## **TEXT BOOKS:**

1. **Kumar, N.** Introduction to Horticulture, Oxford and IBH, Publishing Co. Pvt. Ltd. NewDelhi, 2010.
2. **Sharma, J.R.**, “*Principles and Practice of Plant breeding*”, Tata MCG raw–Hill publishing Company Ltd., New Delhi, 1994.
3. **Prasad, S. and Kumar, U.**, “*Principles of Horticulture*”, Agro Botanica, India, Revised Edition, 1999.

## **REFERENCE BOOKS:**

1. **George Acquaaah**, “*Horticulture Principles and practices*”, Prentice-Hall of India Private Ltd., 2<sup>nd</sup> Edition 1673.
2. **Jitendra Singh**, “*Basic Horticulture*”, Kalyani Publishers, New Delhi, Reprint, 2004.
3. **Manibhushan Rao, K.**, “*Textbook of Horticulture*”, Macmillan India Ltd., 2000.
4. **Saini, R.S., Kaushik, N., Kanshik, R.A. and Godara, N.R.** Practical Nursery Production, Agrobios, 2006.
5. **Allard, R.W.**, “*Principles of plant breeding*”, John Wiley & sons, INC. Singapore, 2000.
6. **Singh, J. R.**, “*Plant breeding principles and methods*”, Kalyani Publishers, Ludiana, Seventh Edition, 2008.

## SEMESTER - V

### Skill Based Subject III - Herbal Botany

Instructional Hrs. : 45

Sub. Code : 15BOUS503

Max. Marks : CIA – 25; ESE - 75

Credits : 3

**Objectives:** To study the application of medicinal plants. To study the remedial plants for common diseases.

#### UNIT – I

9 Hrs.

Importance and relevance of Herbal drugs in Indian system of medicine. Ethnobotany – abstract relationship – *Tribal communities in Tamil Nadu*.

#### UNIT – II

9 Hrs.

Remedial plants for Cancer, Heart diseases, Urinary disease, Diabetes and *Iron deficiency*.

#### UNIT – III

9 Hrs.

Remedial plants for Gastro intestinal problems, Skin diseases, Arthritis, Pulmonary problems and *Anaemia*.

#### UNIT – IV

9 Hrs.

Poisonous plants, Hallucinogens, Teratogens, *Allergens*, Stimulant and Depressant.

#### UNIT – V

9 Hrs.

Plants for Body care - Bath oil, Hair oil, Shampoo, *Herbal Perfumes*.

**Note :** *Italics* denote Self Study Topics

### **TEXT BOOKS:**

1. **Arumugam, K.R. and Muruges, N.**, "*Text Book of Pharmacognosy*", Sathya Publishers, Madurai, Reprinted, 2008.
2. **Panda, H.**, "Herbal Cosmetics" -Handbook, Asia Pacific Business Press Inc. Delhi.
3. **Anbazzhakan, S.**, "*Principles of Plant Systematics and Medical Botany*", Nalankilli Pathippagam, First Edition, 2009.

### **REFERENCE BOOKS:**

1. **Handa, S.S. and Kapoor, V.K.**, "*Pharmacognosy*", Vallabh Prakashan, Delhi, Second Edition, 2003.
2. **Kokate, C.K, Purohit, A and Gokhale, S.R.**, "*Pharmacognosy*", Nirali Prakashan, Pune, 43<sup>rd</sup> Edition, 2009.
3. **Wallis, T.E.**, "*Text book of Pharmacognosy*", CBS publishers and distributors, Delhi, First Edition, 1985.