



B.Sc. PLANT BIOLOGY & PLANT BIOTECHNOLOGY

PART IV C SKILLED BASED GENERAL ELECTIVE NURSERY TECHNIQUES AND LANDSCAPING

B.Sc. va (Candidates admitted from the academic year 2008-2009)

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Theory

UNIT I

Commercial Floriculture: Cultivation method of some important cut flower crops – Rose, Carnation, Orchids, Gladiolus, Anthurium and Gerbera.

Soil nutrients, sterile soil mixtures (vermiculite, perlite, moss, etc.). Organic fertilizers and Inorganic fertilizers.

UNIT II

Artificial plant growing structures: Greenhouse, Poly house, Mist chamber and Shade nets.

Garden Implements: Forks, Spades, rakes and hoes. Hand tools, cutting and sawing equipment, watering equipment.

UNIT III

Propagation of Plants: Sexual propagation - seed production, germination, sowing the seeds and transplanting. Vegetative propagation - stem, leaf and root cuttings. Propagation by division and layering. Budding and grafting. Propagation of bulbs, corms, tubers and rhizomes. Propagation through tissue culture.

Key words: Wounding, Adventitious shoots, bud-forcing, Callus Bridge, Compound layering, stock, scion and embryo culture.

UNIT IV

Principles and Elements of landscape architecture: Types of garden, Planning and Design, Lawn and ground cover, Types of grasses, creating and maintenance of lawn, Garden adornments. Special methods of landscaping - Hanging baskets, arborisculpture, roof gardens, container gardening, rock gardens, terrarium & vivarium, Bonsai, water gardens and hydroponics.

Key words: Point of attraction, Vertical features, Border, hedges & edges, screens, Topiary and Pergolas.

UNIT V

Garden maintenance: Methods of Watering, weeding, mulching, pruning, potting and repotting. Pests and diseases, control measures – Mechanical

control, Organic control and Chemical control.

Key words: Damping-off, ornamental virus, disinfectants, weedicide.

UNIT VI

Important Trees, Shrubs, Climbers, Perennials, Annuals, Bulbs, Succulents, bamboos and ferns that are employed in landscaping.

Suggested Reading

ADAMS, 2005. Principles of Horticulture. IVth Ed. Elsevier India Pv. Ltd.

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ERLER, C. T. 2005. New Complete Home Landscaping: Designing, Constructing, Planting. Creative Home Owner Publishers.

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HARTMAN, H. T., D.E. KESTLER, F. T. DAVIES, Jr. AND R. L. GENERE, 1997. Plant Propagation: Principles and practices. VIth Ed. Prentice & Hall of India. New Delhi.

HUNTER, J. M. AND L. CARPENTER, 2003. Teach yourself Gardening. Hodder Publishers.

INGELS, J. E. 2003. Landscaping principles and practices. VIth Ed. Thomsan Delmar Learning Publishers.

JANICK JULES. 1979. Horticulture Science. Third Ed. W.H. Freeman and CO. San Francisco. USA.

KUMAR, N. 1997. Introduction to Horticulture. Sixth Edition. Rajalakshmi Pub.

Nagerkoil. S.India.

LEILA DHANDA. 1984. Bonsai Culture. Oxford and IBH publishing Co. New Delhi.

MOORE, R., AND W.D. CLARK. 1995. Botany: Plant Form and Function. Vol. I. W.M.C. Brown Publishers.

RANDHAWA AND A. MUKHOPADYAY.1986. Floriculture in India. Allied Pub. Pvt. Ltd. New Delhi.

SUSAN BERRY, 2004. The home guide to Gardening Techniques. Murdoch Books.

TIWARI, G.N. and R.K. GOYAL. Green House Technology - Fundamentals, design, modeling and application. Narosa publishing house. New Delhi.

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