

A.S.D GOVT DEGREE COLLEGE FOR WOMEN (A)

(Re-Accredited by NAAC with 'B')
KAKINADA 533002EASTGODAVARI, ANDHRA PRADESH

DEPARTMENT OF HORTICULTURE

I B.Sc HORTICULTURE ANNUAL ACADEMIC PLAN 2020-2021

SEMESTER - I, COURSE – I

FUNDAMENTALS OF HORTICULTURE AND SOIL SCIENCE

MONTH	TOPIC
February 2021	<p>Unit I: Introduction to Horticulture</p> <ol style="list-style-type: none">1. Horticulture: Definition, importance of horticulture in terms of economy, production, employment generation, environmental protection and human resource development.2. Divisions of horticulture with suitable examples and their importance.3. Area, production of Horticultural crops in A.P. and India.4. Fruit and vegetable zones of India and Andhra Pradesh.5. Export scenario and scope for Horticulture in India. <p>Unit II: Classification of Horticulture Crops</p> <ol style="list-style-type: none">1. Classification of horticultural crops based on soil and climatic requirements.

<p>March -2021</p>	<p>2. Vegetable crop gardens – Nutrition and kitchen garden – tracer garden – vegetable forcing –market garden– roof garden</p> <p>3. Gardens in Floriculture– flower gardens–soil and mixed gardens; landscape Horticulture.</p> <p>Unit III: Characteristics of Orchards</p> <p>1. Orchard: Definition, different systems of planting orchards square, rectangular Quincunx, hexagonal and contour.</p> <p>2. Calculation of planting densities in different systems of planting.</p> <p>3. Different types and methods of pruning.</p> <p>4. Training: Definition, principles and objectives; merits and demerits of open and close centered, and modified leader systems.</p>
<p>APRIL- 2021</p>	<p>Unit IV: Physico-chemical characteristics of Soil</p> <p>1. Soil: Definition, minerals and weathering to forms soils; factors of soil formation.</p> <p>2. Soil taxonomy; soil color, texture and structure; other physical properties and stability.</p> <p>3. Soil colloids and charges; ion adsorption and exchange; soil temperature and soil air.</p> <p>4. Soil pH and acidity; soil alkalinity and salinity.</p>
<p>MAY-2021</p>	<p>Unit V: Soil as a living matter</p> <p>1. Soil organic matter–composition and decomposability.</p> <p>2. Humus–fractionation of organic matter.</p> <p>3. Soil biology: Soil microorganisms and fauna–beneficial and harmful roles.</p> <p>4. Integrated nutrient management and soil tests.</p>

II B.Sc HORTICULTURE ANNUAL ACADEMIC PLAN 2020-2021

SEMESTER - III, COURSE – III

PLANT PROPAGATION AND NURSERY MANAGEMENT

MONTH	TOPIC
JUNE 2021	Unit -1: Sexual Propagation <ol style="list-style-type: none">1. Sexual propagation – advantages and disadvantages.2. Seed germination, process of seed germination; factors affecting seed germination;3. Pre-germination treatments and viability tests; sowing methods of seeds.4. Polyembryony in propagation of <i>Opuntia</i>, trifoliate orange, mango and <i>Citrus</i>.
JULY -2021	Unit -2 : Asexual Propagation <ol style="list-style-type: none">1. Asexual propagation – advantages and disadvantages.2. Using bulbs, corms, tubers and rhizomes to raise nursery.3. Stolons, runners and offsets in raising nursery.4. Apomixis : Definition; role of apomictics in propagation of apple, mangosteen and <i>Citrus</i>.
AUGUST- 2021	Unit- 3 : Vegetative Propagation Techniques Cuttings: Definition, propagation by root, leaf and stemcuttings. <ol style="list-style-type: none">1. Layering : Definition, techniques of simple, serpentine, mound, trench and airlayering.2. Grafting : Definition; approach and detached scion (Veneer, whip, cleft, side and bark) grafting techniques.3. Budding : Definition; techniques of T- , patch and chipbudding.

<p>SEPTEMBER -2021</p>	<p>Unit – 4 : Basic requirements ofaNursery</p> <ol style="list-style-type: none"> 1. Plant nursery: Definition, importance; Basic facilities for a nursery; layout and components of a good Nursery. 2. Nursery beds – types, their merits and demerits; precautions to be taken during preparation. 3. Brief account of growing media; nursery tools and implements. 4. Containers for plant Nursery. 5. Brief account of plant propagation structures.
<p>OCTOBER 2021</p>	<p>Unit -5 : Nursery Management</p> <ol style="list-style-type: none"> 1. Bureau of Indian Standards (BIS-2008) related to nursery; guidelines for nursery raising. 2. Nursery accreditation and Certification. 3. Seasonal activities and routine operations in a nursery; watering, weeding and control of pests and diseases. 4. Common possible errors in nursery activities. 5. Economics of nursery development and record maintenance; online nursery information and sales systems.