Unit-I
1. Horticulture-definition, branches, scope, importance, background, present status and problems.
2. Interrelation of horticulture to agriculture and other discipline of science.
3. Significance of horticulture to mankind.

Unit-2
1. Seed definition - Types and different classes of horticultural seed.
2. Seed Structure - Dicot and Monocot seed.
3. Seed germination - Types and requirements for germination.

Unit-3
1. Characteristics of good quality seeds.
2. Determination of seed quality and its factors.
3. Purity, vigor, viability and factors affecting seeds. Rouging, isolation distance, thinning, procedures.

Unit-4
1. Seed showing method.
2. Irrigation-systems and methods, water requirement for plant.
3. Drainage - Objectives, system of drainage, difference between irrigation and drainage.
5. Fertilizers - Definition, classification.
6. Pest and disease and their control

Unit-5
1. Plant propagation by seeds/sexual Vegetative propagation
2. Advantages and Disadvantages of sexual propagation.
3. Advantages and Disadvantages of vegetative propagation.
4. Method of vegetative propagation - Rootage - cutting, layering
   Graftage - grafting, budding
Unit-I
1. Package of practices for the cultivation of major fruits.
   a) Mango         b) Guava         c) Citrus
   d) Papaya        e) Banana

Unit-2
1. Package of practices for the cultivation of major fruits.
   (a) Grape         (b) Pineapple
   (c) Ber          (d) Aonla        (e) Pomegranate
   (f) Custard apple (g) Cashew nut (h) Fig

Unit-3
1. Package of practices for the cultivation of major vegetable –
   (a) Potato       (b) Onion        (c) Garlic
   (d) Ginger       (e) Sweet potato
   (f) Turmeric     (g) Radish       (h) Carrot

Unit-4
1. Package of practices for the cultivation of major vegetable.
   (a) Brinjal      (b) Chilli       (c) Tomato
   (d) Okra         (e) Cauliflower  (f) Cabbage
   (g) Pea          (h) Sem

Unit-5
1. Structure of flower.
2. Method of flower production of –
   (a) Rose         (b) Tuberose     (c) Marigold
   (d) Gladiolus    (e) Dahlia       (f) Jasmine
Unit-I
1. Orchard – Establishment.
   (a) Selection of site 
   (b) Selection of fruit 
   (c) Layout
   (d) Preliminary operation 
   (e) plantation 
   (f) Pruning
   (g) Training 
   (h) Wind breaker
2. Care and Management of orchard.

Unit - II
1. Vegetable farm- classification of vegetables.
2. Establishment and layout of vegetable farm.
3. Ornamental garden.

Unit - III
1. Seed bed – Characteristics of seed bed
2. Nursery - Importance, development
3. Establishment and layout of nursery.
5. Green house

Unit IV
1. Horticultural tools-
   (a) Layout tools 
   (b) Intercultural tools
   (c) Plantation tools 
   (d) Thinning and Heading tools
   (e) Packing tools 
   (f) Irrigation tools
   (g) Spray and Dusting tools
2. lawn - (a) Selection of site
   (b) Characteristics of planned good lawn.

Unit V
1. Weeds Definition of characteristics and their importance in Agriculture.
2. Classification of weeds and crop-weed relationship.
3. Herbicides – Types, time of application.
4. Terminologies:
   (a) Active ingredients
   (b) Acid equivalent
   (c) Polarity: Polar and non-polar 
   (d) LD-50 and ED 50 values for crops.
Unit-I  
(Farming Systems)  
1. Importance of sustainable horticultural farming system.  
2. Principle of successful farming system.  

Studies on various system of farming:  
(i) Intensive farming  
(ii) Extensive farming  
(iii) Cooperative farming  
(iv) Collective farming  
(v) Capitalistic farming  

Unit-II  
1. Study of types of farming:  
   (i) Diversified farming  
   (ii) Specialized farming  
   (iii) Mixed farming  
   (iv) Ranching  
   (v) Irrigated farming  
   (vi) Dryland horticulture  
   (vii) Experimental farms  
   (viii) Demonstration farms  
   (ix) Instructional farms  

2. Factors determining the type of farming with emphasis on their merits and demerits:  
   (a) Physical factors: climate, soils and topography  
   (b) Economic factors  
   (c) Social factors  

Unit-III  
Cropping system:  
(i) Definition and importance of cropping systems.  
(ii) Comparison of farming systems  

1. Types of cropping systems:  
   (i) Mixed cropping: types, merits, principles and demerits  
   (ii) Intensive cropping: definition, object, pre-requisites and methods  

Unit-IV  
1. Multiple cropping:  
   (i) Relay cropping  
   (ii) Overlapping system of cropping  

2. Intercropping:  
   (i) Definition and comparison between intercropping and mixed cropping  
   (ii) Types of intercropping: parallel cropping, companion cropping, synergistic cropping  

3. Cropping system interaction with:  
   (i) Farm resources  
   (ii) Technology  
   (iii) Aerial environment  
   (iv) Edaphic environment  

Unit-V  
1. Components of cropping system:  
   (i) Environment: climate, soil and biological components  
   (ii) Farms resources: land, Irrigation,  
   (iii) Power: manual and mechanical  

2. Crop rotation: definition, principles, advantages, selection of crop rotation.
Unit-I
1. Soil – Definition
2. Composition and formation of Soil.
3. Physical, chemical and biological properties of Soil.

Unit-II
1. Soil Erosion - Definition, causes of erosion, Soil water relationship.
2. Factor affecting soil erosion.
3. Classification of soil on the basis of water holding capacity .
4. Dryland, wetlands, wasteland, marshy lands

Unit-III
2. Soil conservation- planning, water shed management
3. Methods of soil conservation, rainfed agriculture

Unit-IV
1. Plant nutrition-essential elements for plant nutrient, primary element, secondary element
2. Deficiency symptoms of micro and macronutrients nutrients .
3. Method of fertilizer application
4. Tillage- types, object, implements.

Unit-V
1. Agro-forestry- principle ,object and agro-forestry in India.
2. Agro-forestry system ,selection of tree, future of agro-forestry.
3. International council of research in agro-forestry.
4. Social Agro - forestry – objects and principle
Unit-I
1. Fruit preservation – Definition and Advantages.
2. Limitation of fruit preservation.
3. Causes fruit and fruit products

Unit-II
1. General principles of fruit and vegetable preservation, method.
2. Fruit and vegetable preservation method- (a) Canning-process and container.
   (b) Drying

Unit-III
1. Preserved products and their marketing- (a) Pickles
   (b) Jam
   (c) Jelly
   (d) Sauce
2. Agriculture economics – agriculture finance, co-operatives.

Unit-VI -
1. History of plant tissue culture in brief, Totipotency.
2. Techniques of tissue culture - Sterilization techniques, Nutrient media.
3. Callus culture, Anther culture, Meristem culture, embryo culture.

Unit-V
1. Somatic hybridization
2. Achievements in raising horticulture crops by using tissue culture techniques.
3. Significance of tissue culture in horticulture