

H. ELECTIVE SUBJECTS

I. AGRICULTURE GROUP

(i) TRADE : HORTICULTURE

11th VOCATIONAL

PAPER-I

FUNDAMENTALS OF HORTICULTURE

THEORY

Time : 2 hrs

Theory : 30 Marks

CCE : 10 Marks

Practical : 50 Marks

Total : 90Marks

- Definition, Importance and Scope of Horticulture.
- Branches of Horticulture, Classification, Distribution of Horticulture Crops and Horticulture Zones of India.
- Selection of Site and Soil for Establishing Orchards , Establishment of Windbreaks
- Layout, Planning and Planting of Fruit Crop.
- Different systems of Planting, High Density Planting.
- Method of Irrigation in Fruit Crop with Special Reference to Drip Irrigation.
- Manuring and Fertilization in Fruit Crop, Method and Time of Application.
- Technique of Training and Pruning of Fruit Crop. Rejuvenation of Senile Orchards.
- Different Technique of Weed Management in Orchards.
- Protection of Fruit Plants During Summer and Winter Season.
- Propagation Techniques: Methods Asexual and Sexual Propagation, Selection of Rootstock and Scion.
- Nursery Raising, Preparation of Bed, Seed Sowing, Protection, Hardening, Lifting and Packing of Seedlings.
- Methods of Communication and Transfer of Technology.

FUNDAMENTAL OF HORTICULTURE

Time : 3 hrs

PRACTICAL

Marks : 50

- Survey and selection of site for orchard establishment.
- Identification and working of garden tools and farm implements.
- Collection and analysis of soil and water samples for orchards.
- Study of material and plants required for fencing.
- Visit to fruit plant nursery and understanding different components of fruit nursery.
- Study of different types of fertilizers, manures and bio fertilizers.
- Preparation of nursery beds, sowing of seeds for rootstock development.
- Practicing the lifting, packing and transplanting of plants.
- Study of different system of irrigation with special reference to drip and sprinkler in an orchard.
- Practicing training and pruning in fruit crops.
- Extraction of seeds, seed storage of various root stocks. Scarification and stratification of seeds.
- Propagation through cuttings, budding, layering and grafting in different fruit plants.

PAPER-II

POMOLOGY

THEORY

Time : 2 hrs

Theory : 30 Marks

CCE : 10 Marks

Practical : 50 Marks

Total : 90Marks

- Importance and Scope of Fruit Industry in India with Special Reference to Punjab.
- Nutritive Value of Fruits and Their Role in Human Diet.
- Classification of Fruit Crops Based on Climatic Requirements; Fruit Growing Zones in Punjab.
- Commercial Cultivation of Major Fruit Crops with Special Reference to their Origin, Soil & Climatic Requirements , Varieties, Propagation Techniques , Time of Planting, Training & Pruning ,Manuring & Fertilization, Inter-culture, Irrigation, Weed Control, Pests & Disease Management , Harvesting and Post Harvest Handling, Storage and Marketing of - Mango, Papaya, Sapota, Citrus Fruits, Guava, Grape, Litchi, Ber, Pomegranate, Amla, Pear, Peach, Jamun.

POMOLOGY

Time : 3 hrs

PRACTICAL

Marks : 50

- Visit to an orchard and understanding different features of an ideal orchard.
- Identification of different fruit crops and their major varieties.
- Identification of different pests of fruit crop.
- Identification of important diseases of fruit crops.
- Study of physiological disorders in fruit crops.
- Identification of nutritional deficiencies in fruit plants.

PAPER-III

OLERICULTURE

THEORY

Time : 2 hrs

Theory : 30 Marks

CCE : 10 Marks

Practical : 50 Marks

Total : 90Marks

- Importance of Vegetables and Their Role in Human Diet.
- Present Status and Future Scope of Vegetable Production in Punjab.
- Classification of Vegetables Based upon Climate Zone Parts used in Food, Cultural Practices.
- Types and System of Vegetable Growing Including Protected Cultivation and Cropping Sequence.
- Type of Vegetable Garden, Kitchen Garden and Market Gardens.
- Nursery Raising for Vegetables Crops.
- Commercial Cultivation of the Following in Respect to Climate, Soil, Varieties, Planting Method, Irrigation, Weed Control, Plant Protection, Post Harvest Management and Grading - Tomato, Brinjal, Chilli, Okra, Watermelon, Muskmelon, Cucumber, Gourds, Potato, Onion, Garlic, Pea, Cauliflower, Cabbage, Radish, Carrot, Spinach, Lettuce Vegetables of Local Importance.
- Seed Production in Important Vegetable Crops Like Tomato, Cauliflower, Chilli, Peas, Onion, Radish, Watermelon and Potato.
- Importance of Vegetables and Their Role in Human Diet.

OLERICULTURE

Time : 3 hrs

PRACTICAL

Marks : 50

- Visit to vegetable farms and identification of vegetable crops.
- Identification of various vegetable seeds.
- Layout and soil sterilization for vegetable nurseries.

- Use of manure and fertilizers for important vegetable crops.
- Intercultural operations like hoeing, earthing and staking in vegetables.
- Hardening of nursery seedling.
- Study of nutrient deficiency symptoms in important vegetable crops.
- Type of weeds and their control in vegetable crops.
- Identification of important diseases of important vegetable like potato, tomato, chilli, brinjal, pea and their control.
- Visit to a vegetable seed production farm and seed processing unit.
- Grading and packaging of vegetable crops.

II BUSINESS AND COMMERCE GROUP

(i) TRADE : MODERN OFFICE PRACTICES

PAPER-I

**OFFICE MANAGEMENT - I
THEORY**

Time : 2 hrs

**Theory : 30 Marks
CCE : 10 Marks
Practical : 50 Marks
Total : 90Marks**

General Introduction to an Office

Meaning, Importance, Functions, Departments, Role of Office Manager, Duties and Qualities.

Office Organization

Meaning, Principles, Centralization and Decentralization of Office Services, Organizational Charts: Contents, Types, Advantages and Disadvantages.

Office Accommodation and Layout

Office Accommodation, Layout, Principles, Steps in Designing Office Layout, Types of Layout, Government Office vs. Private Office.

Office Environment

Meaning, Importance, Lighting, Temperature, Humidity, Ventilation, Noise, Interior Decoration, Cleanliness, Security and Secrecy.

Office Management

Meaning of Management, Functions of Management: Planning, Organizing, Staffing, Directing, Coordinating, Controlling.