Himachal Pradesh Public Service Commission

No. 3-5/2024-PSC (R-I) Dated 09-05-2025

Syllabus for the descriptive Subject Aptitude Test (SAT) for recruitment to post of Horticulture Development Officer, Class-I (Gazetted) in the Department of Horticulture, H.P. The SAT shall be of 03 hours duration having 120 Marks. The SAT paper shall have two parts i.e. Part-I and Part-II and cover the following topics of M.Sc Agriculture / Horticulture level.

PART-I (60 MARKS)

1. FRUIT SCIENCE:-

- Fundamentals of Horticulture,
- Plant Propagation and Nursery Management,
- Tropical and Subtropical Fruit,
- Orchard and Estate Management, Plantation Crops,
- Temperate Fruit crops,
- Weed Management in Horticultural Crops,
- Dryland Horticulture,
- Tropical Fruit Production,
- Sub-Tropical and Temperate Fruit Production,
- Propagation and Nursery Management of Fruit Crops.

2. VEGETABLE SCIENCE:-

- Tropical and Subtropical Vegetable crops,
- Spices and Condiments,
- Breeding of Vegetable Tuber and Spice Crops,
- Seed Production of Vegetable Tuber and Spice Crops,
- Temperate Vegetable crops,
- Potato and Tuber Crops,
- Precision Farming and Protected Cultivation,
- Growth and Development of Vegetable Crops.

3. POSTHARVEST TECHNOLOGY:-

- Postharvest Management of Horticultural Crops,
- Processing of Horticultural Crops,
- Fundamentals of Food Technology,
- Postharvest Physiology and Biochemistry of Perishables,
- Principles and Methods of Fruit and Vegetable Preservation..

4. FLORICULTURE AND LANDSCAPE ARCHITECTURE:-

- Ornamental Horticulture,
- Breeding and Seed Production of Flower and Ornamental Crops,
- Principles of Landscape Architecture,
- Commercial Floriculture,
- Medicinal and Aromatic Crops,
- Systematics of Ornamental Crops,
- Commercial production of cut flowers,
- Commercial production of loose flowers.

5. PLANT PROTECTION:-

- Nematode Pests of Horticultural Crops and their Management,
- Insect Pests of Fruit, Plantation, Medicinal and Aromatic Crops,
- Apiculture, Sericulture and Lac Culture, Insect Pests of Vegetable, Ornamental and Spice Crops.

PART-II (60 MARKS)

1. NATURAL RESOURCE MANAGEMENT:-

- Fundamentals of Soil Science,
- Soil Fertility and Nutrient Management,
- Environmental Studies and Disaster Management, Soil,
- Water and Plant Analysis,
- Farm Power and Machinery,
- Water Management in Horticultural Crops,
- Organic Farming,

- Agro-meteorology and Climate Change,
- Introductory Agro-forestry, Introduction to Major Field Crops.

2. <u>BASIC SCIENCES:-</u>

- Elementary Statistics and Computer Application,
- Elementary Plant Biochemistry,
- Elementary Plant Biotechnology,
- Introductory Crop Physiology, Growth and Development of Horticultural Crops,
- Introductory Microbiology.

3. <u>SOCIAL SCIENCES:-</u>

- Economics and Marketing,
- Horti-Business Management,
- Fundamentals of Extension Education,
- Entrepreneurship Development and Business Management,
- Information and Communication Technology.

4. <u>ENTOMOLOGY:-</u>

- Insect Morphology,
- Insect Anatomy and Physiology,
- Insect Taxonomy,
- Insect Ecology,
- Biological Control of Insect Pests and Weeds,
- Concepts of Integrated Pest Management,
- Pests of Field Crops,
- Pests of Horticulture and Plantation Crops,
- Post Harvest Entomology,
- Fundamentals of Entomology.

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5. <u>GENETICS AND PLANT BREEDING:-</u>

- Principles of Genetics,
- Principles of Plant Breeding,

- Fundamentals of Quantitative Genetics,
- Principles of Cytogenetics,
- Molecular Breeding and Bioinformatics,
- Breeding of Vegetable Crops,
- Breeding Fruit Crops, Ornamental Crop.

6. SEED SCIENCE & TECHNOLOGY:-

- Seed Developmental Biology,
- Seed Dormancy and Germination,
- Seed Production Principles and Techniques in Field Crops,
- Seed Legislation and Certification,
- Post Harvest Handling and Storage of Seeds,
- Seed Quality Testing and Enhancement.

7. PLANT PATHOLOGY:-

- Mycology,
- Plant Virology,
- Plant Pathogenic Prokaryotes,
- Plant Nematology,
- Fundamentals of Plant Pathology,
- Principles of Plant Pathology,
- Techniques in Detection and Diagnosis of Plant Diseases,
- Diseases of Field and Medicinal Crops,
- Diseases of Fruits, Plantation and Ornamental Crops,
- Diseases of Vegetable and Spices crops.

8. SOIL SCIENCE:-

- Soil Physics,
- Soil Fertility and Fertilizer use,
- Soil Chemistry,
- Soil Mineralogy, Genesis and classification,

- Soil erosion and conservation.