

# TAMIL NADU PUBLIC SERVICE COMMISSION

## SYLLABUS

**CODE NO.064**

### **HORTICULTURE DEGREE STANDARD (Two Papers)**

#### **PAPER – I**

##### **1. BASIC HORTICULTURE:**

Scope and importance of Horticulture and horticultural crops – Area and Production – Imports and Exports – Nutritive value of Horticultural crops – Climatic Zones of India and Tamil Nadu in relation to Horticultural crops – Scope for horticultural development in Tamil Nadu – Factors limiting horticultural crop production – Climate (Rainfall, temperature, Light, humidity, sunshine) – Soil (PH, EC, Soil depth) – Crops suitable for different soils – water (Quality and quantity) – Drainage.

Planning. Layout and Planting of orchards – fencing – wind breaks – spacing – systems of planting – cropping systems – Multitier cropping – cover crops – Intercrops – Mulching – weed control.

Manures and manuring – organic and inorganic manures – Bio fertilizers – Essential elements – functions – deficiency symptoms – fertilizer schedule – Time and method of application.

Irrigation – water requirement of different horticultural crops – various irrigation methods including drip, sprinkler, fog, mist, water stress on horticultural crops.

##### **Training and pruning – principles and methods.**

Flowering – Pollination – fruit set – fruit drop – causes and prevention – unfruitfulness associated with external and internal factors.

Maturity – harvesting – Post harvest handling – Processing and preservation.

##### **Role of plant growth regulators in Horticulture.**

Seed and vegetative propagation – advantages and disadvantages – seed treatment - Important methods of vegetative propagation – cutting – layering – rootstock – scion – (Stock – scion relationship) – Incompatibility – grafting – budding – specialized parts of propagation (bulbs, tubers, offsets, runners etc.) – Mist propagation – Micropropagation.

## PAPER – II

Tropical, subtropical, temperate and arid zone horticultural crops – climate and soil – propagation practices spacing and planting – varieties – nutrient water and weed management – mulching – intercropping – use of growth regulators – yield – Economics – Integrated pest and disease management – pre and post-harvest practices – processing and preservation – Marketing.

Fruit Crops : Mango, banana, grapes, citrus, papaya, Sapota, guava, ber, Pomegranate. annonas, amla, tamarind, jack, pineapple, apple, plum, pear, peach.

Spice Crops : Pepper, Cardamom, nutmeg, cinnamon, clove, allspice, ginger, turmeric, coriander, cumin, fenugreek. fennel.

Plantation Crops : Coffee, Tea, Coconut, Cocoa, Arecanut, Oilpalm, Cashew, Palmyrah. rubber.

Vegetable Crops : Tomato, brinjal, bhendi, chilli, cucumber, melons. gourds, pumpkin, peas, beans, potato, cassava. sweet potato, minor tubers. carrot, radish. Beetroot. Turnip. cabbage. cauliflower. onion, garlic. Amaranthus. other greens. Moringa, chow chow , curry leaf.

Flower Crops : Jasmine. rose, chrysanthemum, Tube rose, crossandra – marigold, Gerbera, orchid. gladiolus. anthurium.

Medicinal Plants : Catharatnthus – Gloriosa. Senna, Pyrethrum – Digitalis.

Aromatic Plants : Geranium – Oil yielding grasses. Patchouli, Mentha.

Ornamental gardening : Landscaping – design and principles – Types of gradens – Layout – garden components – flowering, foliage and Avenue trees – Arboretum – shrubs – creepers and Climbers. cacti and succulents, hedge and edge plants. plants for rockery and water garden – Flowering annulas Indoor plants – Garden adornaments - arches and pergolas. Lawn – grasses – Making and maintenance.

Kitchen garden and Herbal garden.