

1. AGRICULTURE / HORTICULTURE CORE

- Fundamentals of horticulture
- Classification of horticultural crops
- Orchard planning and layout
- Fruit crop production
- Vegetable crop production
- Flower and ornamental crop production
- Plantation and commercial horticultural crops
- Nursery management
- Propagation methods: seed, cutting, layering, grafting and budding
- Rootstocks and scion selection
- Planting material production and quality
- Plant growth and development
- Plant growth regulators
- Soil properties relevant to horticulture
- Soil fertility and nutrient management
- Manures and fertilizers
- Micronutrients and deficiency symptoms
- Irrigation methods and water management
- Drip and sprinkler irrigation
- Water conservation in gardens
- Weed management
- Integrated weed management
- Plant diseases and their management
- Insect pests and pest management
- Integrated Pest Management (IPM)
- Safe and judicious pesticide use
- Pruning and training of plants
- Canopy management

- Garden establishment and maintenance
- Lawn establishment and maintenance
- Turf management
- Seasonal flower management
- Avenue plantation
- Shade trees and ornamental trees
- Shrubs, hedges, climbers and ground covers
- Indoor and outdoor ornamental plants
- Landscape gardening
- Landscape design principles
- Garden planning and aesthetics
- Public parks and municipal gardens
- Urban horticulture
- Urban forestry and green-belt development
- Tree plantation and after-care
- Tree protection and maintenance
- Sustainable landscaping
- Composting and organic waste use in gardens
- Green manure and organic inputs
- Nursery infrastructure and management
- Tools, equipment and garden machinery
- Garden safety and maintenance practices

2. MUNICIPAL GARDEN MANAGEMENT

- Planning municipal parks and gardens
- Garden maintenance schedules
- Manpower planning for garden operations
- Maintenance of lawns, trees, shrubs and flower beds
- Irrigation scheduling

- Seasonal plantation programmes
- Nursery production for municipal requirements
- Replacement of dead/damaged plants
- Tree plantation drives
- Public-space landscaping
- Beautification of roads, medians and public areas
- Avenue plantation and median landscaping
- Green-space management
- Garden records and maintenance registers
- Estimation of garden materials and inputs
- Monitoring contractors/work crews
- Quality control in horticultural maintenance
- Basic municipal project planning and reporting
- Public-use safety in parks and gardens
- Environmental sustainability in municipal horticulture

3. SOIL, WATER AND PLANT HEALTH

- Soil texture, structure and pH
- Soil testing and interpretation
- Essential plant nutrients
- Fertilizer calculation and application
- Organic manures and compost
- Irrigation water quality
- Efficient irrigation systems
- Drainage and waterlogging management
- Plant nutrient deficiency diagnosis
- Common horticultural diseases
- Common insect pests
- Biological control

- Cultural, mechanical and chemical control
- IPM principles
- Pesticide safety and application precautions

4. LANDSCAPE DESIGN

- Principles of landscape design
- Balance, proportion, rhythm, emphasis and unity
- Formal and informal gardens
- Functional zoning
- Garden pathways and circulation
- Lawns and planting beds
- Hedges and borders
- Water features
- Rock gardens
- Vertical/terrace gardening
- Selection of plants according to site conditions
- Colour and seasonal planting
- Low-maintenance landscape planning
- Public garden accessibility and user safety

5. PLANT PROPAGATION & NURSERY

- Sexual and asexual propagation
- Seed dormancy and germination
- Cutting, layering, grafting and budding
- Nursery bed preparation
- Potting media
- Container nursery management
- Mother plant management
- Hardening of nursery plants

- Pest and disease management in nurseries
- Quality planting material
- Nursery scheduling and record keeping

6. COMPUTER / LANGUAGE PREPARATION

- Basic computer knowledge
- MS Word
- MS Excel
- MS PowerPoint
- Basic online systems and document handling
- Data entry and record maintenance
- Basic spreadsheet calculations
- Gujarati language
- Hindi language
- Reading and comprehension of administrative instructions
- Basic official correspondence and reporting