

Annexure-I
Syllabus for AHO requirement

Plant propagation and nursery management : Importance of plant propagation, sexual & asexual method of plant propagation, advantages, disadvantages, detail about grafting, layering, budding, cutting, tissue culture, propagation through specialised plant part, incompatibility, polyembryony, apomixes, parthenocarpy, root stocks, anatomical studies on rooting, scion, graft union, use of PGR, propagation method of horticultural crops, plant propagating structure, media preparation, nursery act, registration, insect pest & disease control of nursery plants, Hi-tech nurseries.

Fruit crops: Importance of fruits classification of fruits, area, production, export, marketing, storage, fruit growing zones of fruit crops, agro-climatic zones & suitable fruits for tropical, subtropical & waste land areas, soil, climate, varieties planting, cultural practices, irrigation, nutrition, weed management plant protection, harvesting, yield, storage, processing, Physiological disorders, insect, pest, diseases management, Post-harvest technology, training, pruning, unfruitfulness of fruits of important fruit crops such as mango, Banana, citrus fruits, Pine-apple, Guava, Citrus, Papaya, Sapota, Bael, Ber, Jack fruit, Pomegranate, Litchi, Jamun, bael, Custard apple, aonla etc.

Plantation crops: Importance, scope, area, production, marketing, processing & cultivation practices of important plantation crops like coconut, areca nut, Oil palm, Palmyrah palm, Cocoa, coffee, tea, rubber, date palm in relation to soil, climate, varieties, plant protection, soil & water management, processing packaging, grading, value addition.

Vegetable crops: Area, production, importance, productivity, export, value addition, off season cultivation, green house cultivation, organic farming, seed production, certification, value addition, storage of vegetable & cultivation of important, tropical, subtropical, temperate, under exploited, perennial vegetable crops in relation to soil, climate, varieties, hybrid, seed rate, spacing, fertiliser dose, physiological disorders, plant protection, harvesting storage, processing, important varieties, vegetable garden etc.

Spices, Condiments, Medicinal plants: History scope, area, production, marketing, export, value addition, processing, storage of important spices, condiments & medicinal plants. Cultivation practices of important spices, condiments and medicinal plants with relation to soil, climate, variety, spacing, fertilisers, plant protection, harvesting & marketing, processing etc. Uses of important spices, condiments & medicinal plants.

Ornamental horticulture: History, definition, scope, importance, marketing, export, aesthetic value, floriculture industry, industrial importance, open cultivation, protected cultivation, packaging, marketing, storage of important commercial flowers, Ornamental trees, climbers, shrubs, herbs, loose flowers, foliage plants, house plants, orchids, cut flowers, different types of garden, parks, gardens features, Bonsai, terrace garden, flower arrangement, bio aesthetic planting, landscape architecture, commercial cultivation of important cut flower crops, lawn & its maintenance, protected cultivation of important flowers & foliage plants.

Related subjects: Precision farming, protected cultivation, drip and sprinkler irrigation, Fertigation, post harvesting technology of horticultural crops, nutrient management, INM, important insect, pest and diseases of horticultural crops, water management, soil management, use of PGR, organic farming and certification, leaf analysis, genetic Engineering, bio-control, different cropping pattern, crop rotation, farming system research, weed management, water management, soil management, seed production, organic farming, protected cultivation, respiration, transpiration, photosynthesis, biotic & abiotic stress management, dormancy, growth and development, horticulture entrepreneurship.

Agro meteorology: Agro climate zones of India & Odisha, Agro- ecology for horticultural crops, Weather & climate, Weather parameters and crop environment, Weather forecasting, Climate change, vulnerability and risks, Climate resilience and climate smart practices.

Soil and nutrition: Soil of Odisha, problematic soils and their management, essential plant nutrients, crop growth, manures and fertilisers, integrated nutrient management for horticultural crop, nutrient use efficiency.

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Water management: Water resources of Odisha, Irrigation development, Soil plant water relation, Water requirement and irrigation efficiencies, Irrigation scheduling, methods & irrigation, micro irrigation & water use efficiencies, Irrigation water quality, stress management.

Weed management: Weeds competition & allelopathy, crop weed association, weed prevention eradication and control, integrated weed management, herbicides and their uses selectivity and environmental impacts.

Dry land farming: Rained and dry land horticulture, drought management, Contingent planning, soil moisture conservation, water harvesting & recycling, watershed management, conservation farming/ horticulture.

Integrated Farming System: Farming system and horticulture, Integrated farming system models (horticultural based), farm machineries & equipment for horticulture, tillage & tillage implements.

Seed technology: Seed quality, seed dormancy, seed production certification storage etc.

Economics: Cost of cultivation of horticultural crops, Entrepreneurship in horticulture, Agribusiness management, marketing.

Statistics: Basic statistical principles, data collection compilation & presentation.

Plant Protection: IPM, biological control, important insect pest, diseases and nematodes of horticultural crops.

Distribution of Marks for Assistant Horticulture Officer

Number of multiple choice questions to be prepared:

1. Plant propagation and nursery management:	20
2. Fruit crops:	20
3. Plantation crops:	20
4. Vegetable crops:	20
5. Spices, Condiments, Medicinal plants:	20
6. Ornamental horticulture:	20
7. Related subjects:	30
8. Agro meteorology:	05
9. Soil and nutrition:	05
10. Water management:	05
11. Weed management:	05
12. Dry land farming:	05
13. Integrated Farming System:	05
14. Seed technology:	05
15. Economics:	05
16. Statistics:	05
17. Plant Protection:	05

Total 200 marks

Total number of questions: 200, Time: 3 Hours, Each question carries one mark. ,No negative marking.