

SUBJECT: PRODUCER/GROWER AND PROCESOR OF SPICES, MEDICINAL & AROMATIC PLANTS (PPSMAP)
CLASS XII
SEMESTER III

THEORY

FULL MARKS:30

[MCQ Type (1 Mark) Question]

| UNIT | Topic | No of periods assigned | Marks |
|------|---|------------------------|-----------|
| 1 | Introduction | 3 | 4 |
| 2 | Classification of SMAG | 4 | 6 |
| 3 | Commercial cultivation of important spice crops | 12 | 8 |
| 4 | Commercial cultivation of important MAP crops | 12 | 4 |
| 5 | Processing, value-added products, packaging and marketing of spices | 7 | 4 |
| 6 | Processing, value-added products, packaging and marketing of MAP | 7 | 4 |
| | Total | 45 | 30 |

DETAIL SYLLABUS

| UNIT | Topic / Sub Topic | No of periods assigned |
|------|---|------------------------|
| 1 | Introduction: Scope and importance and present scenario of spices cultivation; scope, importance and present scenario of cultivation of medicinal & aromatic crops; use of various spices, medicinal & aromatic plants | 3 |
| 2 | Classification of SMAG: Classification of different spices on the basis of nature of plant/life span/ family/growing season/parts used; classification of different medicinal and aromatic plants on the basis of nature of plant/life span/family/growing season/parts used | 4 |
| 3 | Commercial cultivation of important spice crops: Improved cultural hints on soil, climate, varieties, propagation, nursery technique, transplanting, nutrient management, irrigation, weeding, intercultural operations, harvesting and yield of black pepper, turmeric, chilli, onion, coriander and vanilla | 12 |
| 4 | Commercial cultivation of important MAP crops: Improved cultural hints on soil, climate, varieties, propagation, nursery technique, sowing, transplanting, nutrient management, irrigation, weeding, intercultural operations, harvesting and yield of kalmegh, tulsi, aloe vera, ashwagandha, stevia and citronella | 12 |
| 5 | Processing, value-added products, packaging and marketing of spices: Economic importance of processing of spice crops; proper stage and period of harvesting; post-harvest operation and value-added products of black pepper, post-harvest operation and value-added products of turmeric | 7 |
| 6 | Processing, value-added products, packaging and marketing of MAP: Economic importance of processing of medicinal & aromatic plants; proper stage and period of harvesting; post-harvest operation and value-added products of kalmegh, tulsi, aloe vera, citronella and stevia | 7 |
| | Total | 45 |

**SUBJECT: PRODUCER/GROWER AND PROCESOR OF SPICES, MEDICINAL & AROMATIC
PLANTS (PPSMAP)
CLASS XII
SEMESTER IV**

THEORY

FULL MARKS: 30

[SAQ (2 Marks) and LAQ Type (4 Marks) Question]

| UNIT | Topic | No of periods assigned | Marks |
|-------------|---|-------------------------------|--------------|
| 1 | Commercial cultivation of important spice crops | 20 | 10 |
| 2 | Commercial cultivation of important MAP crops | 20 | 10 |
| 3 | Processing, value-added products, packaging and marketing of spices | 15 | 6 |
| 4 | Processing, value-added products, packaging and marketing of MAP | 10 | 4 |
| | Total | 63 | 30 |

DETAIL SYLLABUS

| UNIT | Topic | No of periods assigned | Marks |
|-------------|--|-------------------------------|--------------|
| 1 | Commercial cultivation of important spice crops: Soil, climate, variety, propagation, nursery technique, transplanting, nutrient management, irrigation, weeding, inter-cultural operations, harvesting and yield of ginger, garlic, fenugreek, nigella, bay leaf and curry leaf | 20 | 10 |
| 2 | Commercial cultivation of important MAP crops: Soil, climate, variety, propagation, nursery technique, sowing, transplanting, nutrient management, irrigation, weeding, inter-cultural operations, harvesting and yield of sarpagandha, basak, periwinkle, isabgul, poppy and lemongrass | 20 | 10 |
| 3 | Processing, value-added products, packaging and marketing of spices: Post-harvest operation and value-added products of ginger; post-harvest operation and value-added products of seed spices; packaging and storing of spices and oil extraction of spices | 15 | 6 |
| 4 | Processing, value-added products, packaging and marketing of MAPs: Post-harvest operation and value-added products of sarpagandha, basak, periwinkle, isabgul, poppy, lemongrass; post-harvest operation and oil extraction of lemon grass; post-harvest operation and oil extraction of citronella; packaging and storing of oil | 10 | 4 |
| | Total | 63 | 30 |

PRACTICAL
CLASS XII

FULL MARKS: 50(Practical) + 20 (Project)

NO. OF PERIODS ASSIGNED: 144 (120 for Practical+24 for Project)

DETAIL SYLLABUS

| Sl. No. | Topic | No. of periods |
|--------------------|---|----------------|
| SEMESTER I | | |
| 1 | Preparation of district-wise map of West Bengal for important spice, medicinal and aromatic crops; Preparation of state-wise map of India for important spice, medicinal and aromatic crops | 2 |
| 2 | Preparation of map indicating Agro-climatic Zones of West Bengal | 2 |
| 3 | Soil sample collection, preparation and analysis; Understanding soil health card | 2 |
| 4 | Preparation of compost, vermi-compost and biofertilizer | 6 |
| 5 | Identification of fertilizers along with nutrient content | 2 |
| 6 | Calculation of fertilizers (straight and compound) for major spice, medicinal and aromatic crops | 4 |
| 7 | Identification of plant growth regulators and biofertilizer | 4 |
| 8 | Calculation of different plant growth regulators | 4 |
| 9 | Identification of weeds in fields and wetlands and preparation of weed album | 4 |
| 10 | Identification of insects in fields and storage | 4 |
| 11 | Identification of diseases in spice, medicinal and aromatic crops | 4 |
| 12 | Demonstration of different sources and methods of irrigation | 4 |
| 13 | Identification and use of different farm implements and machinery | 4 |
| 14 | General maintenance of farm machinery | 4 |
| 16 | Identification of seeds of different spice, medicinal and aromatic crops | 2 |
| 18 | Demonstration of seed bags/ packets, certification label, etc. | 2 |
| 19 | Visit to spice, medicinal and aromatic crops production farm | 6 |
| Total | | 60 |
| SEMESTER II | | |
| 19 | Seed treatment (dry and wet) of important spice, medicinal and aromatic crops | 2 |
| 20 | Layout of nursery, sowing and transplanting of spice, medicinal and aromatic crops | 8 |
| 22 | Planting of turmeric, ginger, aloe vera, etc. | 4 |
| 23 | Intercultural operations of different spice, medicinal and aromatic crops | 4 |
| 24 | Weed control practices: hand weeding, mechanical and application of herbicides | 4 |
| 25 | Calculation and spraying of insecticide, fungicide, herbicide, etc. | 4 |
| 26 | Calculation and dusting of insecticides, etc. | 2 |
| 27 | Harvesting of spice, medicinal and aromatic crops | 4 |
| 28 | Visit to a 'Model Spice Garden' | 6 |
| 29 | Visit to a 'Model Medicinal and Aromatic Garden' | 6 |
| 30 | Visit to a Processing unit of spice crops | 6 |
| 31 | Visit to a Processing unit of medicinal crops | 6 |
| 32 | Visit to a Processing unit of aromatic crops | 6 |
| 33 | Preparation of value-added products from spice crops | 4 |
| 34 | Preparation of value-added products from medicinal crops | 4 |
| 35 | Preparation of value-added products from aromatic crops | 4 |
| 36 | Visit to a 'Model Agroforestry' with spice, medicinal and aromatic crops | 4 |
| 37 | Preparation of flow charts for production-based marketing cycle of spice, medicinal and aromatic crops | 4 |
| 38 | Visit to Regulated Market, Farmers' Co-operatives and Panchayat Samitis within | 2 |

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|--|------------------------|------------|
| | the area / district | |
| | Total | 60 |
| | PROJECT | 24 |
| | Total | 84 |
| | Class XII Total | 144 |

PROJECT (20 marks: Two Projects, 10 marks each)

| Sl. No. | Project | Details | Marks |
|----------------|-------------------------|--|--------------|
| 1 | Project I (12periods) | Preparation of nursery bed for raising good quality seedlings of black pepper nursery and growing of bush pepper | 10 |
| 2 | Project II (12periods) | Preparation of coconut based based neera production technology | 10 |
| 3 | Project III (12periods) | Off season coriander cultivation for yield and quality of leaves | 10 |
| 4 | Project IV (12periods) | Preparation of working plan for harvesting and oil extractionof lemon grass for good quality oil | 10 |

Note: The school may develop other Projects as per their needs, choices or available resources.