

2008

100340

HORTICULTURE (Optional)

Time : 3 hours

Maximum Marks : 200

Note :

- (i) In all attempt **Five** questions.
- (ii) Question number **1** is **compulsory**.
- (iii) Of the remaining questions, Attempt **Any Four** by selection **one** question from each section.
- (iv) Figures to the **right** indicate marks of the respective question.
- (v) Number of optional questions upto the prescribed number in the order in which questions have been solved, will only be assessed and excess answers of the question/s will not be assessed.
- (vi) Candidate should not write roll number, any name (including his/her own), signature, address or any indication of his/her identity anywhere inside the answer book otherwise he/she will be penalised.

1. Answer any four of the following questions :

4x10=40

- (a) What are green houses, mention the different types of greenhouses. Write explanatory note on controlling of greenhouse temperature and greenhouse ventilation.
- (b) Discuss the importance of horticulture in national economy and role of APEDA in export of Horticultural produce.
- (c) Explain the importance and scope of mushroom production in Maharashtra and mention the different types of mushrooms under cultivation and their characteristics.
- (d) Define IPM. What are the concepts of IPM and mention its advantages and disadvantages.
- (e) Explain the principles of plant disease control. Mention the symptoms of powdery mildew disease of mango, its causes and control measures.

P.T.O.

SECTION - A

2. Answer the following sub-questions :

- (a) (i) Discuss the impact of horticultural practices viz., varieties of crops, fertilizer application, irrigation and plant protection measures on agro-ecosystems. 10
- (ii) Explain the role of bio-technology in horticulture with reference to crop improvement, Micro-propagation, bio-pesticides and bio-fertilizers. 10
- (b) Write short notes on the following : 20
- (i) Problematic soils of Maharashtra and their management.
- (ii) Field capacity and permanent wilting point.
- (iii) Horticultural uses of hormones.
- (iv) Water conservation methods.

3. Answer the following sub-questions :

- (a) (i) Define photosynthesis. Explain the factors affecting photosynthesis. 10
- (ii) Define environmental pollution. Explain the effects of environmental pollution on crop and human beings. 10
- (b) (i) Define soil. Explain the physical and chemical properties of soils. 10
- (ii) Write explanatory note on role and deficiency symptoms of NPK and Ca in plants. 10

SECTION - B

4. Answer the following sub-questions :

- (a) (i) Define Orchard. What are the points to be considered while establishment of an orchard ? 10
- (ii) Define unfruitfulness. Explain the measures to overcome unfruitfulness in fruit crops. 10
- (b) Write shot notes on : 20
- (i) Advantages of micro-irrigation in horticulture.
- (ii) Sodculture and clean cultivation.
- (iii) Advantages of mulching.
- (iv) Inter-crops and cover crops.

5. Answer the following sub-questions :

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| (a) (i) | Define propagation. Mention the advantages and dis-advantages of vegetative propagation in horticulture crops. | 10 |
| (ii) | Explain the physiology of rooting in cuttage and formation of graft union in grafting. | 10 |
| (b) (i) | Explain the procdution technology of banana with reference to selection of varieties, Suckers, Planting density, manuring and irrigation in Maharashtra. | 10 |
| (ii) | Write short notes on : | 10 |
| (a) | Spongy tissue disorder in mango. | |
| (b) | Causes of citrus decline. | |

SECTION - C

6. Answer the following sub-questions :

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| (a) (i) | Classify the vegetables based on the parts used and season with examples. | 10 |
| (ii) | Define cropping system. Explain the different cropping systems adopted in vegetable crops. | 10 |
| (b) | Write explanatory note on : | 20 |
| (i) | Role of vegetables in human nutrition. | |
| (ii) | Importance of crop rotation in vegetable cultivation. | |
| (iii) | Exploitation of hybrid vigour in crop improvement. | |
| (iv) | Truck gardening in vegetables. | |

7. Answer the following sub-questions :

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| (a) (i) | Define seed dormancy. Mention the different types of seed dormancy seeds and how to overcome seed coat dormancy ? | 10 |
| (ii) | Explain the production technology of tomato with reference to nursery raising, planting, manuring, irrigation and harvesting of fruits. | 10 |
| (b) (i) | Explain the production technology of ginger with reference to selection of varieties, seed rhizomes, planting, manuring and plant protection. | 10 |
| (ii) | Explain the production technology of Alovera with reference to planting, manuring, irrigation, harvesting and medicinal importance. | 10 |

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SECTION - D

8. Answer the following sub-questions :

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| (a) | (i) | Explain the different types of ornamental gardens and their features. | 10 |
| | (ii) | What is meant by protected cultivation ? Mention the advantages and dis-advantages of protected cultivation of horticultural crops. | 10 |
| (b) | (i) | What are the principles of preservation of fruits and vegetables ? Explain the different Methods of preservation. | 10 |
| | (ii) | Write short notes on Bonsai culture and Ikebana. | 10 |

9. Answer the following sub-questions :

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| (a) | (i) | Explain the production technology of tuberose with reference to selection of varieties, planting, manuring, irrigation, harvesting and yield. | 10 |
| | (ii) | Explain the different methods of extraction of essential oils from aromatic plants. | 10 |
| (b) | (i) | Give five examples each of the following : | 10 |
| | (a) | Flowering shrubs. | |
| | (b) | Ornamental creepers. | |
| | (c) | Flowering annuals. | |
| | (d) | Suitable indoor plants. | |
| | (ii) | Explain the importance and scope of agro-forestry in Maharashtra state. | 10 |

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