

AGRICULTURE (Paper II)

Time Allowed : Three Hours

Maximum Marks : 300

QUESTION PAPER SPECIFIC INSTRUCTIONS

(Please read each of the following instructions carefully before attempting questions)

There are EIGHT questions divided in two Sections.

Candidate has to attempt FIVE questions in all.

Question Nos. 1 and 5 are compulsory and out of the remaining, any THREE are to be attempted choosing at least ONE question from each Section.

The number of marks carried by a question/part is indicated against it.

Wherever any assumptions are made for answering a question, they must be clearly indicated.

Word limit in questions, wherever specified, should be adhered to.

SECTION 'A'

1. Answer any THREE of the following, each in about 200 words: **20×3=60**
- (a) What is seed? Discuss different types of seed.
 - (b) Describe the specific features of C4 plants. How they differ from C3 type?
 - (c) Write down the need and benefits of biotechnology
 - (d) Describe the diffusion phenomenon involved in water relation of crops.
2. Answer the following **20×3=60**
- (a) What are ENZYMES? Discuss their mode of action in plant system?
 - (b) Discuss the technique of clonal selection in crop breeding.
 - (c) What is dormancy of seed? How it is managed?
3. Answer the following:
- (a) What is isolation distance? Describe its need in seed production of different crops. **20**
 - (b) Describe the photoperiodism in crop plants. **20**
 - (c) Discuss about Back Cross and Test Cross. **20**
4. Distinguish between the following:
- (a) Endospermic and Non-endospermic seed **20**
 - (b) Short-day and Long-day plants **20**
 - (c) Certified and Truthfully labelled seed **20**

SECTION 'B'

5. Answer any THREE of the following, each in about 200 words: **3×20=60**
- (a) Describe different techniques of I. P. M (Integrated Pest Management).
 - (b) Describe role of Auxins in the growth and development of crop plants.
 - (c) Discuss about Post-Harvest losses in fruits. Describe the technology to minimize the losses in Mango.

- (d) Describe Biopesticides and their use in Agriculture.

6. Answer the following:

20×3=60

- (a) Describe the techniques of Nursery raising, Manuring and Pest control for successful cultivation of Papaya.
- (b) Describe the climatic requirement, seed rate, nursery sowing and disease control measures for Sweet Pepper Cultivation.
- (c) Describe the IPM technique for Mango.

7. Answer the following:

- (a) Discuss about Planting material, Irrigation, Manuring and Harvesting of Gladioli. **20**
- (b) Differentiate between Pesticide and Insecticide. **20**
- (c) Discuss Post-Harvest Management of Citrus. **20**

8. Write short notes on:

20×3=60

- (a) Organophosphates
- (b) Fusarium Wilt
- (c) Mango Mealy Bug