

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 out of the following each in about 200 words: **3×20=60**
- (a) Describe briefly the types of changes in chromosomes number.
 - (b) Define diffusion. What factors influence the rate of diffusion?
 - (c) Describe briefly the mechanism of self-incompatibility.
 - (d) Write on the judicious use of pesticides.
2. Answer the following in about 200 words each:
- (a) What are auxins? Mention their characteristics and practical use in agriculture. **20**
 - (b) Write on tissue culture and its application in modern agriculture. **20**
 - (c) Describe the genetic purity of seed and its importance in agriculture. **20**
3. Answer the following in about 200 words each:
- (a) Critically discuss on vector borne diseases and their management. **20**
 - (b) Describe the laws of heredity and their significance in plant breeding. **20**
 - (c) Write on cultural practices for the management of pest and diseases. **20**
4. Distinguish between the following in about 200 words each:
- (a) Certified seed and foundation seed. **20**
 - (b) Respiration and photosynthesis. **20**
 - (c) Mass selection and recurrent selection. **20**

SECTION 'B'

5. Answer any THREE of the following in about 200 words each: **3×20=60**
- (a) Give the climatic requirements of tomato, garlic, sweet orange and dahlia crops.
 - (b) Discuss briefly on handling and marketing problems of vegetables.
 - (c) Write on the role of fruits in human nutrition.
 - (d) Describe the different formulations of pesticides with examples.
6. Answer the following in about 200 words each:

- (a) Describe in brief the package of practices for cultivation of pineapple. **20**
- (b) List five important diseases of sugarcane and mention their nature of incidence and management. **20**
- (c) Bring out five important pests of rice and mention their nature of damage and management. **20**
7. Write the following in about 200 words each:-
- (a) Mention the procurement and processing constraints of foodgrains in India. **20**
- (b) Write the present status and expected prospects of vegetable crops cultivation in India. **20**
- (c) Describe the causes of low productivity of crops in India in the past. How new technologies application have improved the productivity of different crops? **20**
8. Write short notes on the following in about 200 words each: **3×20=60**
- (a) Pheromones
- (b) Pedigree method
- (c) Photoperiodism.