

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.

All questions carry equal marks.

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 in about 200 words each:
 - (a) Define the chromosome theory of hereditary and discuss about inter chromosomal linkage.
 - (b) Discuss the role of biotechnology in hybrid and improved varieties production in crops and explain the hybrid vigour.
 - (c) Discuss in detail the storage pest problem of pulses and their control.
 - (d) Define the host plant resistance and discuss about its importance in cropping system.
2. (a) Describe the causal organism, life history, nature of damage and control of powdery mildew disease of grapes.
 - (b) Discuss the mechanism and management of insecticidal resistance in insect pest.
 - (c) Describe the breeding procedures which are used for producing new varieties of self pollinated crops.
3. (a) Describe the role of polyploidy in plant breeding.
 - (b) Discuss the foundation and certified seed production.
 - (c) Describe the causes and control of mango malformation.
4. Write notes on the following:
 - (a) Osmotic pressure cell sap
 - (b) Plant pigments
 - (c) Pollination and Fertilization
 - (d) National and International food policies

SECTION 'B'

5. (a) Define the nucleic acids and discuss their structure and functions.
 - (b) Describe the cultivation of roses and its marketing.
 - (c) Discuss the role of photoperiodism and vernalization.
6. Explain the following with examples:
 - (a) Combining ability and its significance in plant breeding
 - (b) Fruit production, processing and distribution in India

- (c) Marketing problems of fruits and vegetables in India
- 7. Comments in detail:
 - (a) Mass and recurrent selection
 - (b) Layout of lawn and garden
 - (c) Red rot of sugarcane
- 8. Write notes on:
 - (a) Germination and dormancy
 - (b) The role of vegetables in human nutrition
 - (c) Mutant varieties