

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) Write Mendelian principles in your own words.
 - (b) Describe the Genetic Purity of Seed.
 - (c) Explain the Growth Promoters and Growth Retardants
 - (d) What is male sterility? How can it be used for crop improvement?
2.
 - (a) Explain integrated pest management. How does it differ from insect pest management?
 - (b) What are the conditions under which insecticides should not be applied?
 - (c) Describe the insects and pests of cotton.
3.
 - (a) Define growth. Describe main stages of growth in plants.
 - (b) Describe the role of Physiology in crop improvement
4. Write short notes on:
 - (a) Acid Treatment of Seed
 - (b) Methods of Lawn establishment
 - (c) Genetic Engineering
 - (d) Foundation Seed
 - (e) Structures for Grain Storage

SECTION 'B'

5. Answer/Comment upon any three of the following in about 200 words each:
 - (a) What is Sustainable Agriculture? How does it differ from Modern Agriculture?
 - (b) Why are hybrids preferred in maize instead of variety? Explain
 - (c) What is Synthetic Variety? How does a synthetic variety differ from a pure line?
 - (d) Describe translocation of Photosynthates.
6.
 - (a) What is the situation of fruit and vegetable processing industry in India? What are their export projections? Support your answer with figures.
 - (b) Describe fruit and vegetable production in India vis-a-vis world production. Support your answer with figures.

7. (a) Define Seed. What are the major constraints in quality seed production in India? Mention the main seed production centres of forage crops in the country.
- (b) What are the storage problems in India? How can the storage losses be minimised?
8. Write short notes on:
- (a) Characteristics of quality seed
- (b) Organochlorines
- (c) Canning
- (d) Allelic Genes
- (e) Plant Cell