

AGRICULTURE (Paper I)

Time Allowed : Three Hours

Maximum Marks : 250

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.

Attempts of questions shall be counted in sequential order. Unless struck off, attempt of a question shall be counted even if attempted partly. Any page or portion of the page left blank in the Question-cum-Answer Booklet must be clearly struck off.

SECTION 'A'

1. Answer the following in about 150 words each:

10×5=50

 - (a) What are the advantages of integrated farming system? Discuss about resource recycling in different integrated farming systems in India.
 - (b) Discuss the climatic parameters in relation to agro-ecosystem. What are the major threats to agro-ecosystem?
 - (c) What is remote sensing? How can we use it in agriculture?
 - (d) Why is evaluation an essential part of any extension programme? State its advantages in brief.
 - (e) Discuss briefly the challenges in agricultural marketing system. State the advantages of supply chain management.
2. Answer the following in about 200 words each:

10×5=50

 - (a) Enumerate the factors influencing soil erosion. Classify and discuss briefly various types of erosion.
 - (b) Discuss the factors affecting crop-weed competition. What do you mean by critical period of crop-weed competition?
 - (c) What are the scientific irrigation scheduling criteria? What is critical stage approach for scheduling irrigation?
 - (d) What are the uses of farm planning and budgeting? Discuss the steps to be followed in farm planning and budgeting.
 - (e) Suggest measures which can help to meet major challenges in agriculture and food security for stabilizing crop yields.
3. Differentiate and elaborate the following in about 150 words each:

10×5=50

 - (a) Photoperiodism and Thermoperiodism
 - (b) Gravitational water and Hydroscopic water
 - (c) Relative and Obnoxious weeds

- (d) Inorganic fertilizers and Bio-fertilizers
 - (e) Group discussion and Buzz session
4. Answer the following in about 250 words each:
- (a) What are the impacts of climatic change in agriculture? How can the impacts be mitigated in crop environment? 20
 - (b) Write about the factors of development of herbicide resistance in weeds. What are the management options? 15
 - (c) What are the causes of soil degradation and pollution? What measures may be adopted to control soil pollution? 15

SECTION 'B'

5. Write short notes on any five of the following in about 150 words each: 10×5=50
- (a) Protected agriculture
 - (b) Green house effect and global warming
 - (c) Participatory rural appraisal
 - (d) Quality of irrigation water
 - (e) Social forestry
 - (f) Ley farming
6. Explain the following in about 150 words each: 10×5=50
- (a) Watershed management
 - (b) Mode of herbicidal action
 - (c) Principle of limited capital and opportunity cost
 - (d) Crop diversification
 - (e) Intercropping
7. Answer the following in about 400 words each: 25×2=50
- (a) Define sustainable agriculture. What are the criteria of sustainability in agricultural system? What are the various approaches to achieve sustainability?
 - (b) Discuss the nitrogen losses from water-logged soil. What are the various practices to increase nitrogen use efficiency in submerged rice?
8. Explain the following in about 200 words each: 12½×4=50
- (a) Persistence of weeds
 - (b) Factors affecting soil structure
 - (c) Broad-based extension
 - (d) Kisan Credit Card