

AGRICULTURE

Paper - I

Time Allowed : Three Hours

Maximum Marks : 200

Question Paper Specific Instructions

Please read each of the following instructions carefully before attempting questions :

*There are **EIGHT** questions in all, out of which **FIVE** are to be attempted.*

*Questions no. **1** and **5** are compulsory. Out of the remaining **SIX** questions, **THREE** are to be attempted selecting at least **ONE** question from each of the two Sections A and B.*

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.

All questions carry equal marks. The number of marks carried by a question/part is indicated against it.

*Answers must be written in **ENGLISH** only.*

SECTION A

Q1. Answer the following in about 150 words each : **8×5=40**

- (a) What are the climatic parameters affecting crop productivity according to which farmers follow the cropping pattern in the western zone of the country ? 8
- (b) Justify the plant ecology and edaphic factors influencing sustainable agriculture. 8
- (c) What are the problems of herbicide-resistance in wheat crop ? 8
- (d) Diversification and intensification are important in present day agriculture. Explain. 8
- (e) What is the importance of agroforestry and social forestry in the changing environment ? 8

Q2. Describe the package and practices, viz., planting pattern, sowing time and spacing, weeds and nutrients management and productivity of the following crops : **10×4=40**

- (a) Chickpea 10
- (b) Wheat 10
- (c) Lucerne 10
- (d) Sunflower 10

Q3. Answer the following in about 200 words each : **10×4=40**

- (a) What are the essential elements of plant nutrients ? State the significance of C : N ratio in crop productivity. 10
- (b) Describe crop management practices in the early stage of saline and alkaline soils. 10
- (c) Describe phosphorus fixation in relation to soil pH. 10
- (d) Soil solarization is an important tool for weed control. Justify. 10

Q4. Answer the following in about 200 words each :

10×4=40

- (a) Describe Dryland technology and Rainfed agriculture for stabilizing production. 10
- (b) Define Land Degradation and discuss the major factors affecting it. 10
- (c) Explain the need of Integrated Nutrient Management (INM) in present day agriculture. 10
- (d) Enumerate the agronomic measures for soil and water conservation and practices adopted by the farmers. 10

SECTION B

Q5. Answer the following in about 150 words each : **8×5=40**

- (a) Discuss the role of Drip/Sprinkler irrigation system in increasing water use efficiency and productivity. 8
- (b) Describe Cropping systems, Intercropping and Relay cropping in agriculture, with examples. 8
- (c) Explain the current water pollution issues in agriculture with suitable remedies. 8
- (d) Vermicompost is important in sustainable agriculture. Justify. 8
- (e) Discuss Water Harvesting and the role of the Government and NGOs for its promotion. 8

Q6. Answer the following in about 200 words each : **10×4=40**

- (a) Explain the short term and long term effects of agriculture mechanization. 10
- (b) Define Farm Management and explain the role of the farm manager in planning intensive agriculture. 10
- (c) Explain about rural employment for women through agriculture. 10
- (d) Price fluctuations of agricultural products have an impact on small and marginal farmers. Justify. 10

Q7. Answer the following in about 200 words each : **10×4=40**

- (a) What are the problems faced by landless agricultural labourers ? What are the steps taken by the Government in order to intervene in the matter ? 10
- (b) Discuss the role of Krishi Vigyan Kendras (KVK) in transfer of technologies to end users. 10
- (c) Explain management of wasteland for promoting agricultural production. 10
- (d) What is Contractual Farming ? What are its merits and demerits in present day agriculture ? 10

Q8. Describe the following in about 200 words each :

10×4=40

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| (a) | Role of Farmers' Field School (FFS) in agriculture | 10 |
| (b) | Role of Cooperative Societies in agriculture | 10 |
| (c) | Importance of Extension Workers in transfer of technology to farmers | 10 |
| (d) | Integrated Farming System and its profitability to the farmers | 10 |