

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.

Question Nos. 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.

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

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.

Answers must be written in ENGLISH only.

SECTION—A

1. Answer the following :

8×5=40

- (a) Discuss the effect of environmental pollution on animals and humans.
- (b) Discuss the impact of climate change on livestock and fisheries.
- (c) Why do we consider soil structure an important soil property for crop production?
- (d) What are the characteristics of suitable tree species for non-conventional forestry?
- (e) What are the advantages and limitations of biological weed control?

2. Answer the following :

10×4=40

- (a) Illustrate with examples the abiotic components in the ecosystem that influence crop growth.
- (b) Discuss the herbicide selectivity phenomenon with the factors affecting it.
- (c) What is the importance of millets in climate resilient agriculture?
- (d) Discuss the major factors for achievement of self-sufficiency in pulse production in India.

3. Answer the following :

10×4=40

- (a) Classify the natural resources and suggest the conservation strategies.
- (b) How does the soil acidity affect crop production?
- (c) Enumerate the applications of remote sensing in agriculture.
- (d) Discuss the factors affecting crop-weed competition.

4. Answer the following :

10×4=40

- (a) Enlist and discuss the types of soil erosion and water conservation management option in Indian perspective.
- (b) Discuss the applications of agro-forestry for socio-economic development.
- (c) Discuss the physical, chemical and biological weathering of rocks and minerals.
- (d) Discuss about contingent planning for rainfed farming.

SECTION—B

5. Answer the following :

8×5=40

- (a) Discuss the measures to enhance water-use efficiency and water productivity in agriculture.
- (b) Discuss in detail the drainage methods in water-logged soil.
- (c) Explain how Agricultural Technology Management Agency (ATMA) approach as Extension Reform to provide extension services is different from previous extension approaches.
- (d) What is farm planning? Enlist the characteristics of good farm plan. Explain the techniques of farm planning.
- (e) Describe the implications of the Farmers' Produce Trade and Commerce (Promotion and Facilitation) Act of 2020 on Indian agriculture.

6. Answer the following :

10×4=40

- (a) What are the advantages of good quality of the irrigation water? Mention its significance.
- (b) Illustrate with examples the effect of water and soil pollution on agro-ecosystem.
- (c) Describe the effects of marketing of agricultural produce by farmers' groups, rather than individually. Explain the advantages and limitations of farmers producer organizations (FPOs) from farmers' perspective.
- (d) Explain the impact of Extension Training on agricultural production in India. Describe how adoption of educational approach will bring the desirable changes in stakeholders.

7. Answer the following :

10×4=40

- (a) Enlist the effects of farm mechanization on rural employment in India.
- (b) Enumerate the role of cooperatives in agricultural economy in India.
- (c) Describe the Government intervention in agricultural marketing and policy related issues.
- (d) Enumerate the role played by Extension Science in making stakeholders innovative during post-Independence and post-Green Revolution era.

8. Answer the following :

10×4=40

- (a) Enlist and explain the first-line extension activities of the Indian Council of Agricultural Research (ICAR) and discuss the current status.
- (b) Describe how extension ensures agricultural development.
- (c) Elaborate the term 'supply chain management' and discuss its importance in emerging agri-business sector.
- (d) Explain the importance of agricultural trade in national economy and enumerate the factors affecting agricultural trade.

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