

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) Discuss the impact of changing climate on cropping pattern and agricultural production. 8
 - (b) Discuss the importance of diversification and intensification in modern agriculture. 8
 - (c) What do you mean by dormancy and dissemination of weed seeds ? Give their significance in spread and survival. 8
 - (d) Discuss the importance and scope for drought-tolerant varieties in crops. 8
 - (e) Discuss the environmental conditions favouring the formation of acidic soils. Give reclamation measures for acidic soils. 8
- Q2.**
- (a) Describe the basis of classification of agro-ecological zones of India. Give the important characteristics and cropping patterns of any two zones. 10
 - (b) What do you mean by weathering of rocks and minerals ? Discuss the role of biological weathering processes. 20
 - (c) Explain the conditions which lead to wind erosion. Discuss the differences between wind breaks and shelter belts measures of controlling wind erosion. 10
- Q3.**
- (a) Give the improved agro-techniques for rice and chickpea with respect to time of sowing/season, method of sowing/spacing, seed rate, nutrients and weed control. 20
 - (b) What are the different groups of microorganisms found in soil ? How do microbes help in soil aggregation, and thereby improvement in physical properties. 10
 - (c) Explain the fundamental principles of soil conservation. Discuss the types and role of mulching in soil conservation. 10
- Q4.**
- (a) Why does fertilizer nitrogen have low plant use efficiency ? Explain the ways to improve the efficiency of fertilizer nitrogen. 15
 - (b) Discuss the importance of agro-forestry, social forestry and natural forests in supplementing the income of the farmers. 15
 - (c) Explain the concepts and benefits of multiple, multi-storey, relay and intercropping. 10

SECTION B

Q5. Answer the following in about 150 words each :

8×5=40

- (a) Discuss the effective scheduling of irrigation of wheat under normal and limited water conditions. 8
- (b) Discuss the economics of organic farming of varied agro-ecological zones of the country. 8
- (c) Discuss the importance, scope and objectives of extension education. 8
- (d) What is eNAM ? How does it safeguard the interests of farm producers ? 8
- (e) What is Farmer Producer Organisation (FPO) ? Discuss its significance for farmers, especially small and marginal farmers. 8

- Q6.**
- (a) What are the importance and characteristics of farm planning ? 15
 - (b) Discuss the structure of agricultural marketing in India. What are the features of the new APMC Act, 2017 ? 15
 - (c) What are problems of waterlogged soils for crop production ? Give suitable measures for its management. 10

- Q7.**
- (a) What are the consequences of direct use of industrial effluents on human health ? 10
 - (b) What do you understand by custom hiring centres ? Discuss their benefits with reference to small and marginal farmers. 15
 - (c) Enlist the needs and objectives of agricultural price policy. 15

- Q8.**
- (a) What are the benefits of cooperative marketing ? Discuss the hindering forces for cooperative movement in India. 15
 - (b) What are the features of Prime Minister Fasal Bima Yojana ? How is it better than the earlier agricultural insurance scheme ? 10
 - (c) Differentiate between training and education. Discuss the role of skill training in empowerment of farm women in SHGs. 15

