

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

