

**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) Enlist the agroclimatic zones of India and give their important cropping patterns. 8
- (b) What is rainfed farming ? Discuss the technologies for stabilizing agriculture production in rainfed areas. 8
- (c) Maintenance of soil health needs regular recycling of lignocellulolytic materials to the soil. Justify. 8
- (d) What is multiple cropping ? Give its significance in increasing the crop production. 8
- (e) Discuss the effect of environmental factors on crop distribution and production. 8

**Q2. Answer the following in about 200 words each :** **10×4=40**

- (a) Discuss how the agroforestry system helps in improving the livelihood of rural people. 10
- (b) Mention the principles of weed management and give their merits and demerits. 10
- (c) Define runoff, give factors affecting it and explain soil loss equation during water erosion. 10
- (d) Highlight the effects of environmental pollution on living beings. 10

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

- (a) Justify the importance of forms of nutrients, their concentrations and ratios to other nutrients in soil for their uptake and crop growth. 10
- (b) Discuss how contingent crop planning helps in dryland agriculture. 10
- (c) Explain green-house effect and sources of their emission. 10
- (d) Describe aquatic weeds and their control management. 10

**Q4. Answer the following in about 200 words each :** **10×4=40**

- (a) Discuss the major constraints in pulse production in India. 10
- (b) What is propagation ? Give advantages of micro-propagation with reference to plantation plants. 10
- (c) What is soil genesis ? Discuss the role of factors of soil formation. 10
- (d) What soil and water conservation practices are required to be adopted under hilly regions ? 10

## SECTION B

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

- (a) Define and explain consumptive use of water, evapotranspiration and water use efficiency. 8
- (b) Discuss the significance of advance farm planning for optimum use of resources. 8
- (c) What is agricultural cooperative farming ? In what way is cooperative farming helpful to small and marginal farmers ? 8
- (d) Describe agricultural price policy and instruments of price policy. 8
- (e) Discuss the role of farmers' participation in identifying needs of the area for planning and development. 8

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

- (a) What are drip and sprinkler irrigation ? Give their merits and demerits. 10
- (b) How does the principle of opportunity cost help farmers to decide what to grow ? 10
- (c) Explain marketing of farm products and marketing functions. 10
- (d) What is programme planning ? Explain its evaluation. 10

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

- (a) How is drainage important ? Explain its types. 10
- (b) What is farm budgeting ? How is it important to farmers ? 10
- (c) Give different approaches to study marketing and problems in marketing of agricultural produce. 10
- (d) How do self-help groups help to provide economic empowerment to rural women ? 10

**Q8. Answer the following in about 200 words each :**

**10×4=40**

- (a) What is selective mechanization and progress of farm mechanization ?  
Explain advantages and disadvantages of farm mechanization. 10
- (b) How is indigenous technical knowledge (ITK) useful to formulate the  
future programmes ? 10
- (c) Specify the criteria for time of irrigation. 10
- (d) Discuss the importance of farm management and its scope, with  
characteristics. 10