

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

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| Q1. | (a) Establish the relationship between Nature, Indian culture and Indian agriculture. | 8 |
| | (b) List down the principles of ecology. | 8 |
| | (c) Enlist different groups of soils found in India and discuss any one in detail. | 8 |
| | (d) Explain various concepts of agroforestry and discuss their benefits towards sustainable development. | 8 |
| | (e) Describe technological options for stabilizing agricultural production in rainfed areas. | 8 |
| Q2. | (a) Environmental pollution is hazardous to crops. Describe with examples. | 15 |
| | (b) Describe the role of organic matter in maintaining soil productivity. | 15 |
| | (c) Enlist the problems of dryland agriculture and describe soil constraints in detail. | 10 |
| Q3. | (a) Enlist the methods of weed control and discuss the physical control of weeds in detail. | 15 |
| | (b) Discuss Integrated Farming System (IFS) with suitable examples. How can IFS improve livelihoods of small and marginal farmers ? | 15 |
| | (c) Enlist the factors for conserving moisture and improving the productivity of soil and describe the vegetative cover factor in detail. | 10 |
| Q4. | (a) What is Land Equivalent Ratio (LER) ? Give advantages and disadvantages of LER. | 15 |
| | (b) Discuss the factors affecting phosphate fixation in soil. | 15 |
| | (c) Write a short note on contour bunding to prevent soil erosion. | 10 |

SECTION B

- Q5.** (a) Describe three distinct phases of evaluation of extension programmes and the need for extension evaluation. 8
- (b) Enlist and briefly explain the roles to be played by Agricultural Extension professionals to ensure quality extension services. 8
- (c) Enumerate the ways and means of how farm planning helps the cultivators to bring efficiency in farming. 8
- (d) Enlist and explain various dimensions of market. 8
- (e) Describe the types of sprinkler irrigation systems. 8
- Q6.** (a) Classify and briefly explain different types of trainings offered according to the stage of career of extension professionals. 15
- (b) Write the causes of waterlogging. Describe in brief about system of surface drainage. 15
- (c) Enlist and explain advantages and problems of farm budgeting. 10
- Q7.** (a) Describe the criteria for scheduling irrigation in detail. 15
- (b) Describe the motives behind Cooperation. Explain three-tier structure of Cooperative Credit Society. 15
- (c) Enumerate key functions of State Agricultural Management and Extension Training Institute (SAMETI). 10
- Q8.** (a) Describe the implications of strong linkages between ATMA and KVK in strengthening extension services. 15
- (b) Enlist different hazards associated with irrigation water quality and discuss the management practices for efficient use of saline water for irrigation. 15
- (c) Enumerate and explain factors affecting cost of marketing of agricultural produce. 10

