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) What are the climatic parameters affecting crop productivity according to which farmers follow the cropping pattern in the western zone of the country? 8

(b) Justify the plant ecology and edaphic factors influencing sustainable agriculture. 8

(c) What are the problems of herbicide-resistance in wheat crop? 8

(d) Diversification and intensification are important in present day agriculture. Explain. 8

(e) What is the importance of agroforestry and social forestry in the changing environment? 8

Q2. Describe the package and practices, viz., planting pattern, sowing time and spacing, weeds and nutrients management and productivity of the following crops: 10×4=40

(a) Chickpea 10

(b) Wheat 10

(c) Lucerne 10

(d) Sunflower 10

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

(a) What are the essential elements of plant nutrients? State the significance of C : N ratio in crop productivity. 10

(b) Describe crop management practices in the early stage of saline and alkaline soils. 10

(c) Describe phosphorus fixation in relation to soil pH. 10

(d) Soil solarization is an important tool for weed control. Justify. 10
Q4. Answer the following in about 200 words each: 10x4=40

(a) Describe Dryland technology and Rainfed agriculture for stabilizing production. 10

(b) Define Land Degradation and discuss the major factors affecting it. 10

(c) Explain the need of Integrated Nutrient Management (INM) in present day agriculture. 10

(d) Enumerate the agronomic measures for soil and water conservation and practices adopted by the farmers. 10
Q5. Answer the following in about 150 words each: 8×5=40

(a) Discuss the role of Drip/Sprinkler irrigation system in increasing water use efficiency and productivity. 8

(b) Describe Cropping systems, Intercropping and Relay cropping in agriculture, with examples. 8

(c) Explain the current water pollution issues in agriculture with suitable remedies. 8

(d) Vermicompost is important in sustainable agriculture. Justify. 8

(e) Discuss Water Harvesting and the role of the Government and NGOs for its promotion. 8

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

(a) Explain the short term and long term effects of agriculture mechanization. 10

(b) Define Farm Management and explain the role of the farm manager in planning intensive agriculture. 10

(c) Explain about rural employment for women through agriculture. 10

(d) Price fluctuations of agricultural products have an impact on small and marginal farmers. Justify. 10

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

(a) What are the problems faced by landless agricultural labourers? What are the steps taken by the Government in order to intervene in the matter? 10

(b) Discuss the role of Krishi Vigyan Kendras (KVK) in transfer of technologies to end users. 10

(c) Explain management of wasteland for promoting agricultural production. 10

(d) What is Contractual Farming? What are its merits and demerits in present day agriculture? 10
Q8. Describe the following in about 200 words each:

(a) Role of Farmers' Field School (FFS) in agriculture

(b) Role of Cooperative Societies in agriculture

(c) Importance of Extension Workers in transfer of technology to farmers

(d) Integrated Farming System and its profitability to the farmers