

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.

Question 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 chronological 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 Answer Book 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

Q. 1. Answer the following in about 150 words each : 8×5=40

Q. 1(a) What are the elements of weather affecting crop production ? Explain the adjustment of cropping system in the aberrant weather conditions. 8

Q. 1(b) The ground water in India is depleting year after year. In this background, discuss the requirement of water for crops with basic principles of irrigation. 8

Q. 1(c) It is said that 80 percent production is from 20 percent irrigated land and 20 percent production is from 80 percent rainfed land in India. Describe the technology for stabilizing agricultural production in rainfed areas where great scope of production exists. 8

Q. 1(d) What is farm planning ? Whether Indian farmers use farm planning ? Discuss the steps and objectives of farm planning. 8

Q. 1(e) Discuss the problems of crop production in dry farming areas and their remedial measures. 8

Q. 2. Discuss in detail : 4×10=40

Q. 2(a) Though it is recommended that soil fertility is to be evaluated before sowing the crop, do Indian farmers follow it ? Discuss different methods and constraints for determining the soil fertility status in remote areas. 10

- Q. 2(b) India has huge area under problem soil. What do you understand by problem soil ? Explain the formation of salt affected soil and methods of reclamation of saline and alkaline soils. 10
- Q. 2(c) A lot of silting is taking place in Indian sea due to soil erosion. What is soil erosion ? Explain the agronomic measures to be adopted for conservation of soil. 10
- Q. 2(d) Rice-wheat crop rotation is very popular in North India. Is this rotation in accordance with principles of crop rotation ? Discuss the advantages and disadvantages of crop rotation. 10
- Q. 3. Write short notes on the following : 4×10=40
- Q. 3(a) What is scheduling of irrigation ? What are different approaches of scheduling of crops ? 10
- Q. 3(b) What are the essential elements of plant nutrients ? State the significance of C : N ratio in crop production. 10
- Q. 3(c) What are the ways by which nitrogen is lost from the soil ? How can nitrogen use efficiency be increased at farmers level ? 10
- Q. 3(d) What is tillage ? Why is zero-tillage getting more importance at present ? 10
- Q. 4(a) What is water harvesting ? Discuss different methods of water harvesting and government initiatives to promote it. 10
- Q. 4(b) What is agroforestry ? Discuss the micro and macro propagation of tree species for agroforestry system. 10
- Q. 4(c) What are the major techno-economic and political causes of low productivity of oilseeds and pulses crops in India ? Discuss the scope of increasing its production. 10
- Q. 4(d) What is organic farming ? Should a country like India go for organic farming ? Discuss the scope and limitations of organic farming in India. 10

SECTION—B

- Q. 5. Answer the following in about 150 words each : 8×5=40
- Q. 5(a) What is farm management ? Enumerate major farm management problems under Indian conditions. 8
- Q. 5(b) What is diversified farming ? Discuss the merits and demerits of this type of farming. 8
- Q. 5(c) Describe the characteristics of agricultural marketing. Explain the problems in marketing of agricultural produce in India. 8

- Q. 5(d) What is evaluation ? What are steps to be followed in extension programme evaluation ?
8
- Q. 5(e) What is Integrated Nutrition Management (INM) ? Explain its advantages and disadvantages in practicing INM at farmers level.
8
- Q. 6. Write notes on the following : 15+15+10=40
- Q. 6(a) The maximum investment of India's import is on Vegetable Oil per year. Explain the causes of import, and ways to reduce import by increasing production. 15
- Q. 6(b) There is huge wastage of fruits and vegetables every year in India. Explain the possible reasons of wastage and control mechanism. 15
- Q. 6(c) India's consumption of electricity in agriculture is increasing every year. Explain the long-term strategy to meet the increasing demand of electricity in agriculture. 10
- Q. 7. Discuss the following : 4×10=40
- Q. 7(a) What is agroforestry ? State the different components of agroforestry system. 10
- Q. 7(b) What is greenhouse effect ? Discuss the impact of global warming in agriculture. 10
- Q. 7(c) What is Contingent Crop Planning ? How it helps in dryland agriculture ? 10
- Q. 7(d) What is multistoreyed cropping ? State the principles of multistoreyed cropping. Also state the important factors that limit the adoption of multistoreyed cropping. 10
- Q. 8. Explain the following : 2×20=40
- Q. 8(a) What is PRA ? What are features of PRA ? Discuss the methods of PRA and how it is different from survey method. 20
- Q. 8(b) What do you understand by ITK ? How it is useful to formulate the research problem ?
20