

152

2011

AGRICULTURE

FIRST PAPER

Full Marks : 200

Time : 3 hours

The figures in the margin indicate full marks for the questions

Answer all questions

1. What is soil? Enumerate different soil-forming factors. Describe with neat diagram different horizons present in soil profile.
5+5+10=20
2. What are the essential plant nutrients and how are they classified? Discuss the role of nitrogen in growth and yield of crops. How do plants uptake nutrients from soil?
3+2+5+10=20
3. What are the special characteristics of weed? Mention the losses caused by weeds in crop production. Describe briefly the methods of herbicidal application.
5+5+10=20

4. What are the factors to be considered in preparation of farm plan and what are the guiding principles you will follow in farm planning? What are the characteristics of a good farm plan? $8+8+4=20$

5. What is irrigation scheduling? State the basis of irrigation scheduling of crops. Write the different approaches adopted for irrigation scheduling. $5+5+10=20$

6. (a) Differentiate between dryland farming and rainfed farming. What are the measures adopted in increasing production of crops in rainfed agriculture? $3+7=10$

(b) List different forms of phosphorus present in soil. How these forms become available to plants? $5+5=10$

7. (a) Define crop ecology. State the edaphic factors influencing it. Discuss the impact of global warming on agriculture. $2+3+5=10$

(b) What is agroforestry? How can the wasteland be developed through adoption of agroforestry system for the economic upliftment of rural population? $2+8=10$

8. (a) What is market intervention advocated to stabilise prices? Do you recommend market intervention for perishable commodities? Justify your answer. 10
- (b) What are the features of policy for agricultural prices? How does it operate? Which are the agencies involved and what are its advantages and disadvantages? 10
9. (a) Discuss the role of Krishi Vigyan Kendra (KVK) and technology assessment and refinement through Institution Village Linkage Programme (IVLP). 10
- (b) What do you understand by Participatory Rural Appraisal (PRA)? What are the possible PRA techniques which could be employed to collect data to prepare village programme? Discuss each technique in brief with suitable illustration whenever possible. 10

10. Differentiate between the following pairs :

4×5=20.

(a) Multiple cropping and multistorey cropping system

(b) Soil productivity and soil fertility

(c) Diversified farming and mixed farming

(d) Kaolinite and montmorillonite clay minerals

(e) Greenhouse effect and green revolution
