

## AGRICULTURE

## Paper-II

Time: 3 Hours

Full Marks: 100

**Instructions :** (1) Answer any **five** questions.

(2) The figures in the right-hand margin indicate full marks for the questions.

1. Write short notes on : 5×4=20
- Multistoried cropping
  - Relay cropping
  - Scope of commercialization of Indian agriculture
  - Importance of agriculture in national economy
2. (a) How is climate change expected to affect crop production and crop productivity ?  
Mention some strategies to cope up with these changes. 2+8=10
- (b) What is integrated weed management ? What are the advantages of integrated weed management ? Briefly describe the integrated weed management strategy in Kharif transplanted rice. 2+4+4=10
3. (a) What is soil erosion ? Briefly discuss the agronomic and engineering measures to control water erosion. 2+8=10
- (b) What are the roles of N, P and K in plant ? What are the deficiency symptoms of these nutrients ? Suggest some management strategies to rectify deficiency of these nutrients. 3+3+4=10
4. (a) What is drainage ? How does surface drainage differ from sub-surface drainage ? Describe the different types of surface and sub-surface drainage. 2+3+5=10
- (b) Describe the package of practices of sugarcane with reference to variety, planting time, spacing, nutrient management, method of planting and irrigation management. 10
5. (a) Write short notes on : 5×2=10
- Mendel's laws of inheritance
  - Backcross method

- (b) How are seeds classified according to nature and precautions with which they are produced ? Give a brief description of each class of seed. Describe the certified seed production process of rice briefly.  $2+4+4=10$
6. (a) Write the causal organisms, most distinguishing symptoms and management practices of the following diseases :  $5 \times 2 = 10$
- (i) Blast of rice
  - (ii) Tikka disease of groundnut
- (b) Write the nature of damage and management practices of the following pests :  $5 \times 2 = 10$
- (i) Swarming caterpillar of rice
  - (ii) Citrus trunk borer
7. (a) Describe the package of practices of pineapple with reference to cultivars, soil type, planting materials, planting time, planting method, nutrient management and regulation of flowering and fruiting.  $10$
- (b) Write short notes on :  $5 \times 2 = 10$
- (i) Growth and development of plant
  - (ii) Photosynthesis
8. (a) What is agricultural extension? State the methods of evaluation of extension programmes. Discuss any one of them.  $2+4+4=10$
- (b) Discuss the various types of farming systems. Write in brief about crop insurance.  $8+2=10$