

# IAS Mains Agriculture 1997

## Paper-II

### Section A

1. Answer any three of the following in about 200 words each
  - a. Write Mendel in principles in your own words.
  - b. Describe the Genetic Purity of Seed.
  - c. Explain the Growth Promoters and Growth Retardants
  - d. What is male sterility? How can it be used for crop improvement?
2. Answer the following questions
  - a. Explain integrated pest management. How does it differ from insect pest management?
  - b. What are the conditions under which insecticides should not be applied?
  - c. Describe the insects and pests of cotton.
3. Answer the following questions
  - a. Define growth. Describe main stages of growth in plants.
  - b. Describe the role of Physiology in crop improvement
4. Write short notes on:
  - a. Acid Treatment of Seed
  - b. Methods of Lawn establishment
  - c. Genetic Engineering
  - d. Foundation Seed
  - e. Structures for Grain Storage

### Section B

5. Answer/Comment upon any three of the following in about 200 words each:
  - a. What is Sustainable Agriculture? How does it differ from Modern Agriculture?
  - b. Why are hybrids preferred in maize instead of variety? Explain
  - c. What is Synthetic Variety? How does a synthetic variety differ from a pure line?
  - d. Describe translocation of Photosynthates.
6. Answer the following questions
  - a. What is the situation of fruit and vegetable processing industry in India? What are their export projections? Support your answer with figures.
  - b. Describe fruit and vegetable production in India vis-a-vis world production. Support your answer with figures

7. Answer the following questions

- a. Define Seed. What are the major constraints in quality seed production in India? Mention the main seed production centres of forage crops in the country.
- b. What are the storage problems in India? How can the storage loss be minimised?

8. Write short notes on:

- a. Characteristics of quality seed
- b. Organochlorines
- c. Canning
- d. Allelic Genes
- e. Plant Cell