PART A

1. What is seed certification? Give a critical account of procedures of seed certification and how the genetic purity of seed is maintained. (6+7+7=20)

2. Describe different types of mutations. Discuss the role of mutation in crop improvement with suitable examples. (8+12=20)

3. Differentiate clearly any four of the following: (4×5=20)
   (a) Autopolyploidy and Allopolyploidy
   (b) Photosynthesis and Photorespiration
   (c) Guttation and Exudation
   (d) Photoperiodism and Thermoperiodism
   (e) Absorption and Adsorption

4. What is the role of Hybridization in improvement of crop plants? Explain the technique followed for incorporating disease resistance. (5+15=20)
5. Mention major dietary deficiencies in India. Why is it more pronounced in young children? Suggest remedial measures. (7+13=20)

6. Write short notes on any four (4×5=20)
   (a) National Food Security Mission
   (b) Food processing
   (c) Protected cultivation of horticultural crops
   (d) Plant quarantine measures
   (e) Pheromones

7. (a) Discuss the causes of citrus decline and their management (10)
     (b) Discuss briefly the prevention and curative measures for control of stored grain pests. (10)

8. Analyse the main causes of low productivity of fruit and vegetables in North East region. Discuss measures to minimize post harvest losses of fruits and vegetables. (10+10=20)

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