

AGRICULTURE

PAPER - II

Time Allowed : 3 hours

Full Marks : 100

*Marks for each question is indicated against it.
Attempt any 5 (five) questions taking not more than 3 (three) questions from each Part.*

PART - A

1. Describe different types of mutations? Discuss the role of mutation in crop improvement with suitable examples. **(8+12=20)**
2. Define the term transgenic? What are the different products of transgenic? What are the pros & cons of transgenic crops? How transgenic crop is going to impact the Indian agriculture? **(2+5+5+8=20)**
3. Explain the following: **(2×10=20)**
 - (a) Protection of plant varieties and farmer's right act (2001).
 - (b) Seed dormancy and various means to break seed dormancy.
4. What is metabolism? Kindly explain the carbohydrate and fat metabolism in plants. **(4+8+8=20)**

PART - B

5. Discuss post harvest losses in fruits and vegetables. Suggest various means to avoid losses due to post harvest diseases. **(20)**
6. What is Integrated Pest Management (IPM)? What are the five steps of IPM? Deliberate the IPM in rice? **(2+8+10=20)**
7. What is food & Nutritional security? What is the status of food grain production and food security in Mizoram? Delineate the strategies to become self-sufficient and exporter of food grain in the North Eastern region. **(2+8+10=20)**
8. What is Protein Energy Malnutrition (PEM)? What are the different types of PEM? What are the determinants of PEM? How PEM affecting our under five children? **(2+4+6+8=20)**