

Exam. Code : 107404

Subject Code : 2242

B.Sc. Bio-Technology Semester—IV

BOTANY—C

Paper—BT-2

Time Allowed—3 Hours] [Maximum Marks—40

Note : Attempt ALL the Sections.

SECTION—A

Note : Attempt ALL the parts. Answer to any part should not exceed 1/3 of a page.

1. What are the physiological adaptations found during cold stress ?
2. Define transpiration.
3. Name the causal agent and control measures of TMV of potato ?
4. Define Crop rotation.
5. Write down the role of late embryogenesis abundant proteins.
6. What are phytoalexins ?
7. Name the secondary host of *Puccinia graminis tritici*.
8. Define heat shock proteins.  $8 \times 1 = 8$

**SECTION—B**

**Note :** Attempt any **FIVE** questions. Answer to any question should not exceed **two** pages.

1. Give a brief account of osmosis.
2. Describe briefly the dehydrins.
3. Explain briefly the causal agent and disease cycle of loose smut of wheat.
4. Briefly describe the disease resistance host pathogen interaction.
5. Describe heat shock proteins.
6. Briefly explain the mode of transmission of plant diseases.
7. Write down the various physiological adaptations made by plants in respect of heat stress.
8. Explain briefly the disease cycle of Bunchy top banana.

5×4=20

**SECTION—C**

**Note :** Attempt any **TWO** questions. Answer to any question should not exceed **five** pages.

1. Write short notes on :
  - (a) Transpiration and its role in plants
  - (b) Water potential.
2. Write a detailed note on Black stem rust of wheat with respect of its causal agents, symptoms, disease cycle and their control measures.
3. What are the control methods used to exclude the pathogens from the host ?
4. Describe in detail the role of heat shock proteins in stress physiology.

2×6=12