

Exam. Code : 107404
Subject Code : 2302

B.Sc. (Bio Technology) 4th Semester
BT-2 : BOTANY-C

Time Allowed—3 Hours] [Maximum Marks—40

SECTION—A

Note :— Attempt **ALL** the parts. Answer to any part should not exceed $\frac{1}{3}$ of a page. $8 \times 1 = 8$

1. What do you understand by stress physiology ?
2. Define transpiration.
3. What are dehydrins ?
4. Define heat shock proteins.
5. Define phytoalexins.
6. Describe plant pathology.
7. Give the binomial name of the causal agent of loose smut of wheat.
8. Which disease is caused by *Colletorichum falcatum* ?

SECTION—B

Note :— Attempt any **FIVE** questions. Answer to any question should not exceed 2 pages. $5 \times 4 = 20$

1. Describe the role of heat shock proteins.
2. Write a note on osmosis.
3. Briefly explain water potential.

4. Describe the role of late embryogenesis abundant proteins.
5. Write a note on host pathogen interaction.
6. Define PR proteins. Describe their types and functions.
7. Draw a labelled life cycle of *Phytophthora infestans* and *Alternaria solani*.
8. Describe the symptoms of red rot of sugarcane. How can you control this disease ?

SECTION—C

Note :— Attempt any **TWO** questions. Answer to any question should not exceed **5** pages. $2 \times 6 = 12$

1. Describe the physiological and molecular adaptations in plants with respect to drought stress.
2. Describe in detail the role of different osmolytes in stress tolerance.
3. Describe the modes of transmission of fungi, bacteria and viruses.
4. Describe the symptoms, causal agent, disease cycle and methods of controlling downy mildew of bajra.