

UG 5th Semester Examination 2021

BOTANY(Honours)

Paper: DSE-2

[CBCS]

Full marks: 25

Time: Two Hours

1. Answer any five questions of the following

1 × 5 = 5

- a) What is PR protein?
- b) Define acclimatization.
- c) What is a hypersensitive response in plants?
- d) Give an example of stress signalling chemicals in plants.
- e) What is systemic acquired resistance?
- f) Define stress tolerance.
- g) Give an example of an enzyme that neutralizes ROS in plants.

2. Answer any four of the following:

3×4 = 12

- a) How does jasmonate signalling enable plants to adapt and survive?
- b) Describe the role of reactive oxygen species in the plant immune system.
- c) Briefly explain how HR responses are effective to overcome biotic stress in plants.
- d) Briefly discuss the role of HSP in plant protection from high-temperature stress.
- e) Briefly describe different types of PR proteins in plants.
- f) Write a brief note on Phospholipid Signaling in plants.
- g) Discuss different types of abiotic stresses of plants.

3. Answer any one of the following:

8×1 = 8

- a) Define “environmental stress”. Describe in brief the different types of physiological adaptations in plants to overcome environmental stress with reference to changes in root shoot ratio. (2+6)
- b) What are the different types of signal receptors in plants? Describe briefly the Calcium signalling in plants under stress conditions. (3+5)