

U.G. 6th Semester Examination - 2021**BOTANY****Course Code : BBOTDSHC6****Course Title : Stress Biology**

Full Marks : 30

Time : 2 Hours

*The figures in the right-hand margin indicate marks.**Candidates are required to give their answers in their own words as far as practicable.*

1. Answer any **ten** from the following: $1 \times 10 = 10$
- Name two transgenic crops developed against salt stress.
 - What do you mean by strain in the context of plant stress biology?
 - What are stress enduring plants? Give example.
 - What is necrotrophy?
 - What is xylem cavitation?
 - What are salt glands?
 - Name two proteins produced during drought stress.

- What is turgor pressure?
- What are osmolytes?
- What are tyloses?
- What are phytoalexins?
- What do you mean by photoinhibition?
- Give two negative effects of ozone in plants.
- Define xenobiotics.
- What do you mean by halopriming?

2. Answer any **five** from the following: $2 \times 5 = 10$
- Briefly discuss the effect of high-light on plants.
 - What is hypersensitivity response? Give example. $1+1$
 - Differentiate between Systemic Acquired Resistance (SAR) and Localized Acquired Resistance (LAR).
 - What do you mean by Pathogenesis-Related Proteins? Give example. $1+1$
 - Mention the name and function of any two-mechanical barrier of plants against biotic stress.

- f) What are halophytic plants? Give one example. 1+1
- g) Why do heat shock proteins not denature?
- h) Define epinasty. Give one example 1+1
3. Answer any **two** from the following: 5×2=10
- a) What do you mean by second messenger molecule? Discuss the calcium-mediated signaling transduction in plants against abiotic stress. 1+4
- b) Describe the effects of water stress on photosynthesis and nitrogen metabolism. 5
- c) What do you mean by vitrification? Briefly discuss the effects of temperature stress on plants. 1+4
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