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B.Sc./5th Sem (H)/BOTA/23(CBCS)

2023

5th Semester Examination

BOTANY (Honours)

Paper : C 12-T

[Plant Physiology]

[CBCS]

Full Marks : 40

Time : Two Hours

The figures in the margin indicate full marks.

*Candidates are required to give their answers
in their own words as far as practicable.*

Group - A

Answer any **five** of the following questions : $2 \times 5 = 10$

1. What is stratification of seeds?
2. What is CDL?
3. What are P_r and P_{fr} ?
4. What is facilitated diffusion?
5. What do you mean by permanent wilting percentage? What is embolism?

P.T.O.

(2)

6. How can you distinguish between symporter and co-transporter?
7. Expand NAA and 2,4-D.
8. What is triple response of ethylene?

Group - B

Answer any **four** of the following questions : $5 \times 4 = 20$

9. Write chemical nature and physiological roles of ABA.
2+3
10. Write essentiality and deficiency symptoms of nitrogen and zinc for plant nutrition.
 $2\frac{1}{2} + 2\frac{1}{2}$
11. Describe in brief, the mode of action of IAA in cell elongation.
12. What is the role of aquaporin? Mention the classes of aquaporin found in plant cell.
2+3
13. Describe the role of blue light in the opening and closing of stomata.
14. Who are the proponents of Transpiration Pull Theory? Explain the theory with proper demonstration.
1+4

Group - C

Answer any **one** of the following questions : $10 \times 1 = 10$

15. What does it mean by photoperiodic induction? Briefly

describe the biochemical nature of phytochrome. Comment on the importance of low temperature in flowering induction. 2+4+4

16. What are the major components of phloem sap? Describe the role of sucrose- H^+ transporter in phloem loading. What is meant by apoplastic and symplastic pathway of phloem transport? 2+5+3
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