2024

5th Semester Examination

BOTANY (Honours)

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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 : 2×5=10

1. What is guttation?
2. Explain why the water potential of cell is usually negative.
3. What do you mean by source-sink relationship?
4. Write the difference between symport and antiport.
5. Name two hormones responsible for flowering.
6. How much ascent is possible through xylem for one atmospheric pressure?

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7. What is the role of aquaporin?

8. Write the function of ATPase pump.

Group - B

Answer any ***four*** of the following questions : 5×4=20

9. Write essentiality and deficiency symptoms of sulphur and manganese for plant nutrition. 2½+2½

10. Discuss phloem translocation with reference to pressure flow hypothesis. 5

11. What is ascent of sap? Discuss cohesion-tension theory. 1+4

12. "Vernalisation can involve epigenetic changes in gene expression" — Explain. What is the significance of vernalisation? 3+2

13. What is seed dormancy? What causes seed dormancy? Write the significance of seed dormancy. 1+2+2

14. Write the roles of phytochrome in photomorphogenesis. What is vernalization? 4+1

Group - C

Answer any ***one*** of the following questions : 10×1=10

15. Write chemical nature with basic structure and physiological roles of auxin and cytokinin. (2+3)×2

16. Describe briefly the mechanism of stomatal movement. What are the factors affecting stomatal movement? What do you mean by phloem loading and unloading? 4+2+4