TB245779P

Reg. No :.....

Name :.....

BACHELOR'S DEGREE (C.B.C.S) EXAMINATION, NOVEMBER 2024

2018, 2019, 2020, 2021 ADMISSIONS SUPPLEMENTARY

SEMESTER V - CORE COURSE (BOTANY)

BO5B07B18 - Plant Physiology and Biochemistry

Time : 3 Hours

Maximum Marks : 60

Part A

I. Answer any Ten questions. Each question carries 1 mark (10x1=10)

1. Define osmosis.
2. Write two characteristic features of phycobilins.
3. How do the concentration of substrates affect respiration?
4. Differentiate between source and sink.
5. Define chlorosis.
6. Write any two physiological adaptations of plants against salt stress.
7. Expand ABA. What is its significance?
8. What is HSP? What is its role in coping temperature stress in plants?
9. Describe pKa.
10. What are ketosugars? Give one example.
11. Draw the general structure of amino acids.
12. What are the general features of lipids?

Part B

II. Answer any Six questions. Each question carries 5 marks (6x5=30)

13. What are antitranspirants? With examples, explain the mechanism of their action and applications.
14. Give a comparative account on aerobic and anaerobic respiration.
15. Discuss glycolysis.
16. What is Munch's mass flow hypothesis? Explain the theory with respect to translocation of organic solutes.
17. What is allelopathy? How is it significant as a plant defense mechanism?
18. Write a detailed account on measurement of pH of a solution.
19. Explain enzyme action with the help of induced fit theory.
20. Which are the classes of amino acids? Give one example each.
21. Write the general structure and types of isoprenoids

Part C

III. Answer any Two questions. Each question carries 10 marks (2x10=20)

22. Explain the role of potassium ions in controlling stomatal movement in plants.
23. Give an account on Tricarboxylic acid cycle.
24. Citing examples, write an essay on the tropic and nastic movements exhibited by plants .
25. Write an essay on classification of carbohydrates.