TB205090V

Reg. No :.....

Name :.....

B. Sc. DEGREE (C.B.C.S.S) EXAMINATION, NOVEMBER 2022

2020 ADMISSIONS REGULAR AND 2019, 2018 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. 'Anaerobic respiration is less efficient than aerobic respiration'. Substantiate.
3. Write two characteristic features of phycobilins.
4. What are quantasomes?
5. Define chlorosis.
6. Expand ABA. What is its significance?
7. What are tropic movements?
8. Name the gaseous hormone. State one of its physiological effect.
9. Describe pKa.
10. What are disaccharides? Give one example.
11. Describe glycosidic bonds.
12. What are natural fats? Write its general structure.

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. Discuss Blackman's law of limiting factors.
15. What is Munch's mass flow hypothesis? Explain the theory with respect to translocation of organic solutes.
16. Discuss the factors that control respiration in plants.
17. List out the physiological effects and practical applications of ABA and cytokinins.
18. Describe the electrometric method of measurement of pH.
19. Describe the Michaelis-Menten equation.
20. Describe the structure of a starch molecule.
21. Write the general structure and types of isoprenoids

Part C

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

22. Write an essay on the theories that explain water transport in plants.
23. Give an account on Tricarboxylic acid cycle.
24. Classify plant movements. With suitable examples, explain the various types of plant movements that you have studied.
25. Which are the classes of carbohydrates? Write a detailed account of the classes with examples.