TB222050W

Reg. No :.....

Name :.....

B. Sc. DEGREE (C.B.C.S.) EXAMINATION, MARCH 2023

2022 Admissions Regular & 2021 Admissions Supplementary / Improvement And 2020, 2019 And 2018 Admissions Supplementary

SEMESTER II - COMPLEMENTARY COURSE 2 (BOTANY)

(For ZOOLOGY)

BO2C01B18 - PLANT PHYSIOLOGY

Time : 3 Hours **Maximum Marks : 60**

Part A

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

1. What is guttation?
2. Explain the term stomatal index.
3. What are scotoactive stomata?
4. Explain osmotic potential.
5. What are trace elements? Give an example.
6. What is the carbon acceptor in C4 plants?
7. Which are the organelles taking part in photorespiration?
8. What are accessory pigments?
9. Differentiate grana and thylakoid.
10. Which is the hormone responsible for cell division?
11. What is abscission?
12. Define photomorphogenesis.

Part B

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

13. Explain osmotic and non-osmotic mechanism of active absorption.
14. Explain the vital force theories of ascent of sap.
15. Briefly explain the radial conduction of water from root hairs to root xylem.
16. Give the deficiency symptoms of any three micronutrients.
17. Write an account on photosystems and photosynthetic units.
18. Describe the major internal factors affecting the rate of photosynthesis.
19. What are CAM plants? Explain the process of carbon fixation in them.
20. Explain the concept of sink and source.
21. Describe the concept of florigen in flowering.

Part C

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

22. Explain the Potassium-Abscisic acid theory of stomatal opening.
23. Explain Hatch and Slack pathway of carbon metabolism. What are its advantages?

24. Explain the mass flow hypothesis of Munch.
25. What are phytohormones? Explain their role in plant growth.