

TB146070A

Reg. No.....

Name.....

B. Sc. DEGREE (C.B.C.S.S.) EXAMINATION, MARCH 2017

SEMESTER VI - BOTANY

BOT6PPB - PLANT PHYSIOLOGY AND BIOCHEMISTRY

Time: Three Hours

Maximum Marks: 60

PART A

I. Answer all questions. Each question carries one mark.

1. Define RQ.
2. What is water potential?
3. What is fluorescence?
4. What are phytochromes?
5. Name a synthetic auxin.
6. What is chlorosis?
7. What are coenzymes?
8. What are euryhaline halophytes?

(8x1=8)

PART B

II. Answer any six questions. Each question carries two marks.

9. Explain Munch's mass flow hypothesis.
10. What is fermentation? What are the different types of fermentations?
11. What is vernalisation?
12. What are antitranspirants? Give one example.
13. Differentiate between trace elements and tracer elements.
14. What are allelochemicals? Name an example.
15. Define pH. What are pH indicators?
16. What are the physiological adaptations in plants against salt stress?
17. What are the different types of bonds found in amino acids?
18. What is Kranz anatomy?

(6x2=12)

PART C

III. Answer any four questions. Each question carries four marks.

19. Explain the cyclic and non-cyclic photophosphorylation with schematic diagrams.
20. Explain the different types of monosaccharides.
21. Explain electron transport system of mitochondria.
22. What are the physiological effects of auxins?
23. What are the differences between C₃ and C₄ plants?

24. What are acids and bases? What are their basic properties?

(4x4=16)

PART D

IV. Answer any two questions. Each question carries 12 marks.

25. What are the factors affecting the velocity of enzyme action?

26. Describe the different types of compound lipids and their role in biological system.

27. Explain the fate of pyruvic acid in aerobic respiration.

28. Describe the theories explaining the opening and closing of stomata.

(2x12=24)