

B. Sc. DEGREE (C.B.C.S.S) EXAMINATION, MARCH 2018**(2015 Admission Regular)****SEMESTER VI - CORE (BOTANY)****BO6B11TB - PLANT PHYSIOLOGY AND BIOCHEMISTRY****Time : Three Hours****Maximum Marks : 60****Part A****I. Answer all questions. Each question carries 1 marks**

1. What is guttation?
2. What is fluorescence?
3. What are phytochromes?
4. What is the significance of pH in life?
5. Write the general structure of a triglyceride

(5x1=5)**Part B****II. Answer any Five questions. Each question carries 2 marks**

6. Differentiate between apoplastic and symplastic pathways
7. Write a note on fermentation.
8. Write a short account on action spectrum and absorption spectrum of chlorophyll.
9. Explain Emerson enhancement effect.
10. Describe the practical applications of Gibberellin
11. What is a buffer?
12. What are the various classes of carbohydrates? Explain the structure.
13. Write a note on essential and non-essential amino acids.

(5x2=10)**Part C****III. Answer any Five questions. Each question carries 5 marks**

14. Write a note on the role of nitrogen in plants giving special emphasis to the deficiency symptoms.
15. Describe the factors affecting photosynthesis
16. Explain the process of photorespiration
17. Describe carbon fixation mechanism in crassulacean plants.
18. Explain photoperiodism
19. Write a note on pH indicators
20. Write a short account on the common sugars seen in plants
21. Differentiate homopolysaccharides from heteropolysaccharides. Give examples.

(5x5=25)**Part D****IV. Answer any Two questions. Each question carries 10 marks**

22. Write an essay on translocation of solutes in plants
23. Explain in detail the carbon dioxide fixation in C₃ and C₄ plants. Add a note on their structural differences.
24. Explain the structure and functions of mono, di and polysaccharides
25. Explain the mechanism and regulation of enzyme action.

(2x10=20)