Reg. No…….. Name…… **20U607**

B.Sc. DEGREE END SEMESTER EXAMINATION - APRIL 2021

SEMESTER **–6: BOTANY (CORE COURSE)**

COURSE: **15U6CRBOT09: PLANT PHYSIOLOGY AND BIOCHEMISTRY**

(Common for Regular 2018 admission & Improvement 2017/Supplementary 2017/2016 /2015 admission)

Time: Three Hours Max Marks: 60

PART A

I. ***Answer ALL questions; each question carries 1 mark.***

1. What is the position of hydathodes?
2. Define pH?
3. What are enzymes?
4. What is the role of guard cells?
5. Name the primary photosynthetic pigment in green plants.
6. Name the hormone responsible for withering of leaves and branches?
7. What is the deficiency symptom of nitrogen which appears on the vegetative regions?
8. What is DPD? (1 x 8 = 8)

PART B

II. ***Answer ANY SIX questions; each question carries 2 marks.***

9. Define Osmotic potential?
10. What is meant by ascent of sap?
11. Define transpiration? What are the different kinds of transpiration seen in plants?
12. What are lipids?
13. Define RQ?
14. What are phytochromes?
15. What are the practical applications of auxins?
16. Define vernalization?
17. What is meant by phloem loading?
18. What is a peptide bond? (2 x 6 = 12)

PART C

III. ***Answer ANY FOUR questions; each question carries 4 marks.***

19. Briefly discuss the theories associated with the stomatal movement?
20. What are the mechanisms of mineral salt absorption in plants? Explain?
21. Describe transpiration pull theory.
22. Differentiate cyclic and non cyclic photophosphorylations?
23. Briefly discuss the photorespiration in C_3 plants?
24. Explain red drop and Emerson's enhancement? (4 x 4 = 16)

PART D

IV. ***Answer ANY TWO questions; each question carries 12 marks.***

25. Trace the paths of carbon in plants leading to the production of glucose?

OR

26. Explain the mechanisms of enzyme action, and factors affecting enzymatic activity?

27. Explain the major process involved in the production of ATP during respiration?

OR

28. Write an essay on the major fatty acids and their derivatives in plants? (12 x 2 = 24)

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