LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

B.Sc. DEGREE EXAMINATION – **PLANT BIOLOGY AND PLANT BIOTECHNOLOGY**

FIFTH SEMESTER – **NOVEMBER 2014**

PB 5521/5515/5509/5500 - PLANT PHYSIOLOGY

Date : 30/10/2014 Dept. No. Max. : 100 Marks
Time : 09:00-12:00

PART-A

Answer the following, each within 50 words only: (10x2=20marks)

1. Define Imbibition.
2. What are antitranspirants?
3. Write the specific role of manganese in plants.
4. Write the deficiency symptom of iron in plants.
5. Write a note on krantz anatomy.
6. Define red drop.
7. Write a note on Transamination.
8. What are cytochromes?
9. Define parthenocarpy.
10. Comment on vernalization.

PART-B

Answer the following, each within 500 words only: (5x7=35marks)
Draw diagrams wherever necessary:

11. a. Explain in detail the transpiration pull and cohesion of water theory of acent of sap.
    Or
    b. Distinguish between transpiration and guttation.

12. a. Write short notes on soil less culture.
    Or
    b. Describe the active absorption of minerals by plants.

13. a. Explain C_4 cycle.
    Or
    b. Write short notes on photosynthetic pigments

14. a. Give an account on biosynthesis of amino acids
    Or
    b. Describe photorespiration

15. a. What is seed dormancy? What methods are employed to break it?
    Or
    b. Enumerate the physiological role of auxins.

PART-C

Answer any THREE of the following, each within 1200 words only: (3x15=45marks)
Draw diagrams wherever necessary:

16. Describe the mechanism of stomatal transpiration.
17. What are essential elements? Explain the role of nitrogen and phosphorous to plants and how their deficiency affects the plant growth.
18. Explain cyclic and non cyclic photophosphorylation of photosynthesis.
19. Give an account on Krebs cycle.
20. What are phytohormones? Describe the physiological role of gibberellins in higher plants.

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