



**LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034**

**B.Sc., DEGREE EXAMINATION – PLANT BIOLOGY & BIOTECH.**

**FIFTH SEMESTER – NOVEMBER 2013**

**PB 5515/5509/5500 – PLANT PHYSIOLOGY**

Date : 05/11/2013  
Time : 9:00 - 12:00

Dept. No.

Max. : 100 Marks

**PART-A**

**Answer the following, each within 50 words only:**

**(10x2=20marks)**

1. What are the types of transpiration?
2. Define Plasmolysis?
3. What are trace elements?
4. Write any two deficiency symptoms of magnesium.
5. Mention the  $\text{CO}_2$  acceptor in  $\text{C}_3$  &  $\text{C}_4$  plants.
6. Define photorespiration.
7. Define red drop.
8. What are cytochromes?
9. Define vernalization.
10. Write any two functions of cytokinin.

**PART-B**

**Answer the following, each within 500 words only:**

**(5x7=35marks)**

**Draw diagrams wherever necessary:**

11. a. Distinguish between apoplast and symplast.  
Or  
b. Explain ascent of sap.
12. a. What are essential nutrients? Write the specific roles of phosphorus in plants and its deficiency symptoms.  
Or  
b. Write the specific roles of Nitrogen in plants and its deficiency symptoms.
13. a. Describe cyclic photophosphorylation.  
Or  
b. Describe Hatch-Slack pathway.
14. a. Explain Nitrogen cycle.  
Or  
b. Give an account on amino acid biosynthesis.
15. a. Describe the role of auxin in plants.  
Or  
b. Write short notes on Dormancy.

**PART-C**

**Answer any THREE of the following, each within 1200 words:**

**Draw diagrams wherever necessary:**

**(3x15=45marks)**

16. Explain the mechanism of stomatal movement.
17. Describe the process of absorption of solute in plants.
18. What is dark reaction? How does it takes place in C<sub>3</sub> plants.
19. Draw and explain Krebs cycle.
20. Write an essay on photoperiodism.

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