LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

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

FIFTH SEMESTER – NOVEMBER 2015

PB 5521/5515/5509/5500 - PLANT PHYSIOLOGY

Date : 03/11/2015 Dept. No. Max. : 100 Marks

Time : 09:00-12:00

PART – A

Answer the following, each within 50 words only: (10 x 2 = 20 marks)

1. Define Diffusion Pressure Deficit.
2. What is Guttation?
3. Mention the deficiency symptoms of Phosphorous in plants. (Any two)
4. Write notes on Donnan's equilibrium.
5. Write about photosynthetic pigments.
6. Define fluorescence.
7. What is photorespiration?
8. Define transamination.
9. What are phytohormones?
10. What is Vernalization?

PART – B

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

11. a) Write an account on "The Stomata and their role in transpiration".

(OR)

b) Explain in detail about ascent of sap in plants.

12. a) Write short notes on Hydroponics and Aeroponics.

(OR)

b) Give the mechanism of translocation of solutes.

13. a) What is cyclic photophosphorylation? Explain.

(OR)

b) Enumerate CAM pathway in detail.

14. a) Write an account on symbiotic nitrogen fixation in leguminous plants.

(OR)

b) Give concise account of Glycolysis.

15. a) What is seed dormancy? Describe the various methods of breaking seed dormancy.

(OR)

b) What is photoperiodism? Explain the phenomenon.

PART – C

Answer any **THREE** of the following, each within 1200 words.
Draw diagrams wherever necessary: (3 x 15 = 45 marks)

16. Explain the mechanism of absorption of water in plants.

17. Write an account on the role and deficiency symptoms of micronutrients.

18. Trace the path of carbon in C3 cycle.

19. Describe Krebs cycle.

20. Enumerate the physiological role of Auxins and Gibberellins in plants.

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