

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



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

**FIFTH SEMESTER – APRIL 2018**

**PB 5515 / PB 5521 – PLANT PHYSIOLOGY**

Date: 27-04-2018  
Time: 09:00-12:00

Dept. No.

Max. : 100 Marks

**PART – A**

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

**(10 x 2 = 20)**

1. Define pressure potential?
2. What is guttation?
3. Give the deficiency symptoms of potassium?
4. What is aeroponics?
5. What is red drop?
6. Write about the importance of RUBISCO.
7. Write about the importance of ATP.
8. What is leghaemoglobin?
9. Name any two physiological effects of abscisic acid.
10. What is vernalization?

**PART – B**

**Answer the following each answer with in 500 words. Draw diagrams wherever necessary:**

**(5x7=35)**

11. a. Write about the importance of transpiration and the factors affecting transpiration.

**(OR)**

b. Explain the stomatal movement as per photosynthetic theory.

12. a. Describe the importance and deficiency symptom of any 2 microelements.

**(OR)**

b. Write an account on hydroponics.

13. a. Differentiate cyclic and non-cyclic photophosphorylation.

**(OR)**

b. What is CAM? Briefly describe it.

14. a. Write an account on photorespiration.

**(OR)**

b. Describe reductive and transamination process.

15. a. Describe the physiological role of auxin.

**(OR)**

b. Write an account on the physiology of seed germination.

**PART – C**

**Answer any THREE of the following, each within 1200 words draw diagrams wherever necessary:**

**(3x15=45)**

16. Write an essay on the mechanism of water absorption in plants

17. Describe the role of macro and micro nutrients in plant growth and development.

18. Differentiate C3 cycle from C4 cycle.

19. Write an essay on the physiology of nitrogen fixation.

20. Describe the importance of light in flowering.

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