



LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

B.Sc. DEGREE EXAMINATION – PLANT BIOLOGY & PLANT BIO-TECH.

FIFTH SEMESTER – APRIL 2013

PB 5515/PB 5509/PB 5500 - PLANT PHYSIOLOGY

Date: 08/05/2013
Time: 9:00 - 12:00

Dept. No.

Max. : 100 Marks

PART - A

Answer the following, each in about 50 words only:

(10×2=20)

1. Define guttation.
2. What is DPD?
3. What are Stomath?
4. Explain unit-membrane model.
5. What is gluconeogenesis?
6. What is transamination?
7. Distinguish between C₃ and C₄ Plants.
8. What are quantasomes?
9. What is vernalization?
10. Write about ethylene.

PART – B

Answer the following, each answer within 500 words:

(5×7=35)

Draw diagrams wherever necessary:

11. a. Explain the mechanism of stomatal opening and closing.
(or)
b. Describe apoplast – symplast concept.
12. a. Explain the translocation of solutes.
(or)
b. Write about the role of Calcium, Potassium and Magnesium in the plant metabolism.
13. a. Describe photophosphorylation
(or)
b. Describe CAM pathway
14. a. Explain biosynthesis of amino acids
(or)
b. Explain photorespiration
15. a. What are the applications of Gibberellic acid?
(or)
b. Write short notes on photoperiodism.

PART - C

Answer **ANY THREE** of the following, each within 1200 words.

Draw diagrams wherever necessary.

(3×15=45 marks)

16. Explain active and passive absorption of water by roots.
17. Explain the role & deficiency symptoms of any 5 trace elements in plant metabolism.
18. Trace the path of carbon in C₃ plants.
19. Describe Kreb's Cycle.
20. Give an account on Auxins.

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