



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

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

**THIRD SEMESTER – NOVEMBER 2014**

**PB 3511 - PLANT ANATOMY**

Date : 03/11/2014  
Time : 09:00-12:00

Dept. No.

Max. : 100 Marks

**PART – A**

**(10 x 2 = 20 marks)**

**ANSWER THE FOLLOWING QUESTIONS, EACH WITHIN 50 WORDS ONLY:**

01. Define sclereids.
02. What are laticiferous ducts?
03. Write about fascicular and inter fascicular cambium.
04. What is non storied cambium?
05. What is quiescent centre?
06. Define mass meristem.
07. Distinguish between heart wood and sap wood.
08. What are leaf traces and leaf gaps?
09. Comment on palisade tissue.
10. Write notes on phloem wedges of *Bignonia*.

**PART – B**

**(5 x 7 = 35 marks)**

**ANSWER THE FOLLOWING QUESTIONS, EACH WITHIN 500 WORDS.  
DRAW DIAGRAMS WHEREVER NECESSARY:**

11. a) Describe the types of Parenchyma.  
(OR)  
b) Give the structure and functions of xylem elements.
12. a) Explain differentiation of root and stem in detail.  
(OR)  
b) Write critical notes on vascular cambium.
13. a) Give an account of primary meristem and secondary meristem.  
(OR)  
b) Classify meristem based on its position in Plant body.
14. a) Explain the anatomy of a monocot stem.  
(OR)  
b) Describe the secondary structure of a dicot stem.
15. a) Write notes on the types of stomata.  
(OR)  
b) Explain the internal structure of an isobilateral leaf.

**PART – C**

**ANSWER ANY THREE OF THE FOLLOWING QUESTIONS, EACH WITHIN 1200 WORDS.  
DRAW DIAGRAMS WHEREVER NECESSARY. (3 x 15 = 45 marks)**

16. Describe the structure of plant cell wall.
17. Explain the various types of vascular bundles.
18. Discuss the theories on the organization of apical meristem.
19. Give an illustrated account on the primary structure of dicot stem and dicot root.
20. Describe anomalous secondary growth in *Boerhaavia* and *Dracaena*.

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