



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

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

**THIRD SEMESTER – APRIL 2017**

**PB 3511- PLANT ANATOMY**

Date: 03-05-2017  
09:00-12:00

Dept. No.

Max. : 100 Marks

**PART – A**

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

***Answer the following, each within 50 words.***

01. What are laticiferous cells?
02. Mention the components of Phloem.
03. Distinguish between endarch xylem and exarch xylem.
04. What is non storied cambium?
05. Write the Apical cell theory of shoot apex organization.
06. What is quiescent centre?
07. What are lenticels?
08. Define Tyloses.
09. What are bulliform cells?
10. Comment on the medullary bundle of *Boerhaavia*.

**PART – B**

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

***Answer the following, each within 500 words. Draw diagrams and flow charts wherever necessary.***

11a. Write an account on the structure and function of Collenchyma.

**(OR)**

b. Describe the various components of Xylem elements.

12a. Explain briefly about the differentiation of stem and leaf.

**(OR)**

b. Write notes on the types of vascular cambium.

13a. Describe the Tunica-Corpus theory for the organization of meristem.

**(OR)**

b. Discuss the general characteristics of meristem.

14a. Give a detailed account on Nodal anatomy.

**(OR)**

b. Describe the T.S. of monocot root.

15a. Explain the structure and types of stomata.

**(OR)**

b. Describe the anatomy of dorsiventral leaf.

**PART – C**

**(3 x 15 = 45 marks)**

***Answer any three of the following, each within 1200 words. Draw diagrams and flow charts wherever necessary.***

16. Write an account on different layers of Plant cell wall.

17. Give an illustrated account on the types of vascular bundle.

18. Explain in detail about the various types of meristem.

19. Describe the primary structure of dicot stem and dicot root.

20. Explain the anomalous secondary growth in *Bignonia* and *Dracaena*.

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