

LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034



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

THIRD SEMESTER – APRIL 2016

PB 3511 – PLANT ANATOMY

Date: 28-04-2016

Dept. No.

Max. : 100 Marks

Time: 09:00-12:00

PART – A

Answer the following each in about 50 words:

(10 x 2 =20 marks)

1. What is totipotency?
2. Define hydathodes.
3. Explain Bicollateral vascular bundle.
4. Define cambium.
5. What is Dermatogen?
6. What is quiescent centre?
7. Define unilacunar node.
8. What is Lenticel?
9. Define stomata.
10. What are medullary bundles? Cite example.

PART – B

Answer the following, each answer not exceeding 500 words.

Draw diagrams wherever necessary.

(5 x 7 = 35 marks)

11. a. Define collenchyma. Describe the types and function of collenchyma.

Or

b. Write an account on secretory tissues.

12. a. Describe the different types of vascular bundles studied by you.

Or

b. Write an account on vascular cambium.

13. a. Explain the types of meristems based on the position.

Or

b. Write an account of primary and secondary meristems.

14. a. Describe the secondary structure of old dicot stem.

Or

b. Describe the anatomy of monocot root.

15. a. Compare the leaf anatomy of dorsiventral and isobilateral leaves.

Or

b. Describe the anomalous secondary growth in *Aristolochia*.

PART – C

**Answer any THREE of the following, each answer not exceeding 1200 words.
Draw diagrams wherever necessary.**

(3 x 15 = 45 marks)

16. What are complex tissues? Explain the xylem and phloem elements in detail.
17. Explain in detail the differentiation of stem and root.
18. Write an essay on the various theories of organization of apical meristem.
19. Explain the anatomy of an old dicot root.
20. Describe the anatomy of *Bignonia* and *Dracaena* stem.

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