



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

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

**THIRD SEMESTER – APRIL 2013**

**PB 3508/PB 3504/PB 4505 - CELL BIOLOGY AND ANATOMY**

Date: 02/05/2013  
Time: 9:00 - 12:00

Dept. No.

Max. : 100 Marks

**PART –A**

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

**(10 x 02 = 20)**

01. What is Condenser lens?
02. Differentiate Prokaryotic and Eukaryotic cells.
03. Define Centromere.
04. What is Histone?
05. Define Cell Cycle.
06. What is Pit?
07. What is exarch condition of xylem?
08. What is Vascular Bundle?
09. What is Multilacunar node?
10. Define Lenticel.

**PART –B**

**ANSWER THE FOLLOWING, EACH WITHIN 500 WORDS:**

**DRAW DIAGRAMS WHEREVER NECESSARY:**

**(05 x 07 = 35 marks)**

11. a) Briefly describe the working principles and application of Transmission Electron Microscope.  
(OR)  
b) Describe the ultra structure and function of golgi apparatus.
12. a) Write notes on the structure nucleic acids.  
(OR)  
b) Give an account of lampbrush chromosomes.
13. a) Explain the stages of prophase – I of meiosis.  
(OR)  
b) Briefly describe the structural organisation of plant cell wall.

14. a) what are meristems? Describe the different types.

(OR)

b) Describe the types of vascular bundles.

15. a) Briefly describe the anatomy of isobilateral leaf.

(OR)

b) Describe the internal structure of dicot root.

**PART -C**

**ANSWER ANY THREE OF THE FOLLOWING, EACH WITHIN 1200 WORDS;**

**DRAW DIAGRAMS WHEREVER NECESSARY:**

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

16. Write a detailed account of the ultrastructure of mitochondria and its functions.

17. Discuss about the chromosome structure and its organization.

18. Explain the different types of complex tissues.

19. Write an essay on theories relating to shoot and root apex.

20. Explain the anomalous secondary growth in dicot stem with a suitable example.

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