



LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

B.Sc. DEGREE EXAMINATION – PLANT BIOLOGY & BIOTECH.

THIRD SEMESTER – NOVEMBER 2013

PB 3508/PB 3504 – CELL BIOLOGY & ANATOMY

Date : 08/11/2013
Time : 9:00 - 12:00

Dept. No.

Max. : 100 Marks

PART-A

ANSWER THE FOLLOWING, EACH WITHIN 50 WORDS ONLY:

(10 x 2 = 20)

1. Give the principle of Phase Contrast Microscope.
2. State the functions of peroxisomes.
3. What is a karyotype?
4. Define secondary constriction.
5. List the stages of the Cell cycle.
6. Enumerate the significance of Meiosis.
7. State the functions of vascular cambium.
8. What is differentiation?
9. Explain Multilacunar node.
10. Define anomalous secondary growth.

PART-B

ANSWER THE FOLLOWING, EACH WITHIN 500 WORDS:

DRAW DIAGRAMS/FLOW CHARS WHEREVER NECESSARY:

(5x7=35)

11. a) Describe the functions of the Endu Plasmic reticulum.

(OR)

- b) Describe the structure of the plasma membrane.

12. a) Elaborate on Polytene chromosome

(OR)

- b) Write short notes on the structure of Chromosome.

13. a) Describe the structure of Cell wall.

(OR)

- b) Describe briefly the stages of Mitosis.

14. a) Describe the various types of vascular bundles.

(OR)

- b) Explain the different types of Meristems.

15. a) Write notes on the different types of Stomata.

(OR)

- b) Explain the structure of Monocot root.

PART-C

ANSWER ANY THREE OF THE FOLLOWING, EACH WITHIN 1200 WORDS:

DRAW DIAGRAMS/FLOW CHARTS WHEREVER NECESSARY:

(3x15=45)

16. Describe the ultrastructure of mitochondria and enumerate its functions.
17. Describe the organization of chromosome.
18. Describe the different types of tissues in plant cells.
19. Explain the theories associated with the apical meristem.
20. Describe the anomalous secondary growth in *Bignonia* and *Aristolochia*.

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