

LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034



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

THIRD SEMESTER – APRIL 2016

PB 3508/PB 3504 – CELL BIOLOGY AND ANATOMY

Date: 02-05-2016

Dept. No.

Max. : 100 Marks

Time: 09:00-12:00

PART A

Answer the following, each within 50 words only.

(10x2=20marks)

1. Define nucleoid.
2. What are Suicidal bags?
3. Define the term histone.
4. What is a telomere?
5. Mention the functions of Middle lamella.
6. Comment on quiescent centre.
7. What is procambium?
8. What is an annual ring?
9. Illustrate Diacytic stomata.
10. Where is wedge phloem seen, how is it formed?

PART B

Answer the following, each within 500 words.

Draw diagrams wherever necessary.

(5x7=35marks)

11. a) Differentiate the Scanning Electron Microscope from Transmission Electron Microscope.
(OR)
b) Explain the fluid mosaic model of plasmalemma with neat labeled diagrams.
12. a) Explain the terms euchromatin and heterochromatin. Add a note on Giemsa banding.
(OR)
b) Describe the ultrastructure and types of chromosome.
13. a) Write notes on cell cycle.
(OR)
b) What is simple permanent tissue? Explain its types.
14. a) Discuss the various theories on apical meristem.
(OR)
b) Write notes on cambium.
15. a) Give an account on anomalous secondary thickening in Aristolochia stem..
(OR)
b) Describe the internal structure of monocot root.

PART C

Answer any **THREE** of the following, each within 1200 words.
Draw diagrams wherever necessary.

(3x15=45marks)

16. Describe the ultrastructure and functions of mitochondria.
17. Write notes on organization of giant chromosomes.
18. Enlist and explain the different stages of Meiosis.
19. Differentiate the vasculature in stem, root and leaf in dicot.
20. Describe the secondary growth in dicot root.

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