

LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034



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

THIRD SEMESTER – NOVEMBER 2016

PB 3508/PB 3504 – CELL BIOLOGY AND ANATOMY

Date: 08-11-2016

Dept. No.

Max. : 100 Marks

Time: 09:00-12:00

PART- A

(10×2=20marks)

Answer the following, each within 50 words.

1. What are dictyosomes?
2. Enumerate the parts of a compound microscope.
3. Define nucleosome.
4. What is a chromatid?
5. Mention the importance of squash technique in plants.
6. What is quiescent centre?
7. Define vascular cambium.
8. Differentiate amphivasal from amphicribal vascular bundle.
9. What is diffuse secondary growth?
10. What are bulliform cells?

PART- B

(5×7=35marks)

Answer the following, each within 500 words; draw diagrams and flow charts wherever necessary

11. (a) Explain the methodology and applications of a phase contrast microscope.
OR
(b) Describe the ultrastructure and functions of mitochondrion.
12. (a) What is a centromere? Write the classification of chromosomes based on the position of centromere.
OR
(b) Write notes on nucleic acid.
13. (a) Explain the cell cycle in detail.
OR
(b) Give a brief account on simple permanent tissues in plants.
14. (a) Discuss the Histogen theory on meristem.
OR
(b) Describe Tunica Corpus theory?
15. (a) What is anomalous secondary growth? Explain it with reference to *Bignonia*.
OR
(b) Compare the anatomical features of a dicot and monocot leaf.

PART- C

(3×15=45marks)

Answer any three of the following, each within 1200 words; draw diagrams and flow charts wherever necessary

16. Distinguish between Scanning and Transmission Electron Microscopes.
17. Write an essay on giant chromosomes.
18. Explain in detail the reduction cell division in plants.
19. Classify meristems based on position, origin and function.
20. Compare the cross section of a dicot root with that of monocot.
