



LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

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

THIRD SEMESTER – APRIL 2017

PB 3508- CELL BIOLOGY AND ANATOMY

Date: 28-04-2017
09:00-12:00

Dept. No.

Max. : 100 Marks

PART- A

Answer the following, each within 50 words.

10×2=20marks)

1. Mention the types of electron microscopes.
2. Give the composition of the plasma membrane.
3. Write notes on centromere.
4. What is an idiogram?
5. Mention any four types of parenchyma.
6. Define amitosis.
7. What is Tunica Corpus theory?
8. Mention the importance of Intercalary meristems.
9. Mention the types of nodal anatomy found in dicotyledons.
10. What is isobilateral leaf?

PART- B

Answer the following, each within 500 words. Draw diagrams and flow charts wherever necessary.

(5×7=35marks)

11. (a) Mitochondrion is a semi autonomous organelle- substantiate.
OR
(b) Discuss the ultrastructure of a chloroplast.
12. (a) Write notes on polytene chromosome.
OR
(b) Elaborate the types of histones and the formation of nucleosome.
13. (a) Give an account of complex tissues in plants.
OR
(b) Explain the cell cycle.
14. (a) Discuss the Histogen theory.
OR
(b) Explain the different types of vascular bundles.
15. (a) What is secondary growth? Add a note on the formation of periderm.
OR
(b) Describe the structure of various types of stomata.

PART- C

Answer any three of the following, each within 1200 words. Draw diagrams and flow charts wherever necessary. (3×15=45 marks)

16. What are cell organelles? Add a note on the structure and functions of endoplasmic reticulum.
17. Describe the types of nucleic acids in plants.
18. Give a comparative account on mitosis and meiosis.
19. Write notes on: a) Vascular cambium b) Annual rings c) Laticifers.
20. Explain the anomalous secondary growth in Bignonia and Dracena.
