

LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

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

THIRD SEMESTER – NOVEMBER 2009

B 315 – PLANT CELLS : STRUCTURE

Date & Time: 11/11/2009 / 9:00 - 12:00 Dept. No.

Max. : 100 Marks

PART A

Answer all questions, each within 2 or 3 sentences only: (10 × 2 = 20)

1. Cell theory
2. Transfer cells
3. Middle lamella
4. Unit Membrane
5. Photosynthetic pigments
6. Heterochromatin
7. Extranuclear DNA
8. Crossing over
9. Senescence
10. Karyotype

PART B

Answer any FIVE of the following each within one page only. Draw necessary diagrams. (5 × 8 = 40)

11. Enumerate and explain the properties of cytoplasm.
12. Explain fluid mosaic model of plasma membrane.
13. Explain about the fine structure of mitochondria.
14. Give an account of the cytochemistry of nucleic acids.
15. Write notes on One gene – One enzyme hypothesis.
16. Describe the stages of mitosis.
17. With suitable examples, explain cytotaxonomy.
18. What are the cytological changes takes place in crown gall disease?

PART C

Answer any TWO of the following, each within 3 or 4 pages only. Draw necessary diagrams. (2 × 20 = 40)

19. Explain the ultra structure of cellulosic cell wall.
20. Give on account of the fine structure and functions of chloroplast.
21. Describe the organization of chromosome.
22. Write an essay on Meiosis-I.
