

LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034



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

THIRD SEMESTER – APRIL 2018

16UPB3MC02– CELL BIOLOGY AND EVOLUTION

Date: 07-05-2018

Dept. No.

Max. : 100 Marks

Time: 09:00-12:00

PART- A

Answer the following, each within 50 words.

(10×2=20marks)

1. What is protoplasm?
2. Write notes on cell theory.
3. What are dictyosomes? Enumerate its components.
4. What are ergastic substances?
5. What is Idiogram.
6. What is a telomere.
7. Define karyokinensis.
8. What are viral vaccines?
9. State Darwin's postulates.
10. Comment on Neo Darwinism.

PART- B

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

(5×7=35marks)

11. (a) Explain the structure of a prokaryotic cell.

OR

(b) Enumerate the uses of microscopy in the field of cytology .

12. (a) Discuss the fluid mosaic model of plasma membrane.

OR

(b) Explain the structure and functions of endoplasmic reticulum.

13. (a) Write notes on formation of nucleosome.

OR

(b) Elaborate the ultrastructure of chromosome.

14. (a) Describe amitosis and add a note on mitotic abnormalities.

OR

(b) What are the various sub phases of prophase in meiosis I.

15. (a) What is speciation? Add a note on its types.

OR

(b) Explain the use and disuse theory.

PART- C

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

16. Explain the working principle and mechanism of TEM.

17. Describe the ultrastructure of mitochondria and elaborate on its functions.

18. Give a comparative account on lampbrush and polytene chromosomes.

19. What is a cell cycle? Add a note on the various phases of mitosis.

20. Write an essay on the various concepts on Origin of life.
