

LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034



B.Sc. DEGREE EXAMINATION – ADVANCED ZOOLOGY AND BIOTECHNOLOGY

FIFTH SEMESTER – NOVEMBER 2016

AZ 5516 – CELL AND MOLECULAR BIOLOGY

Date: 01-11-2016

Dept. No.

Max. : 100 Marks

Time: 09:00-12:00

PART – A

ANSWER **ALL** questions:

(10x2=20 marks)

1. Define cell theory.
2. What is a fixative? Give an example.
3. What is resolving power?
4. Comment on autoradiography.
5. What is tissue culture?
6. Comment on metachromasia?
7. What are desmosomes?
8. Outline the types of RNA.
9. What are supernumerary chromosomes?
10. What is cell signalling?

PART – B

ANSWER ANY **FOUR** questions:

(4x10=40 marks)

11. Elucidate the ultrastructure and models of plasma membrane.
12. Highlight the functions of lysosomes.
13. Describe the structure and functions of Golgi complex.
14. Explain the hormones and receptors in cell signalling.
15. Give an account on DNA damage and repair mechanism.
16. Write notes on nuclear transplantation.

PART C

ANSWER ANY **TWO** questions

(2x20 = 40 marks)

17. Explain the principle and protocol of cell fractionation and centrifugation.
18. Explain the central dogma, components and mechanism of protein synthesis.
19. Discuss the difference between mitosis and meiosis.
20. Give an account of Cancer and cell cycle.

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