

LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034



M.Sc. DEGREE EXAMINATION – ZOOLOGY

SECOND SEMESTER – APRIL 2022

PZO 2501 – MOLECULAR CELL BIOLOGY

Date: 15-06-2022

Dept. No.

Max. : 100 Marks

Time: 09:00 A.M. - 12:00 NOON

Part A

Answer ALL the questions

(10×2=20 Marks)

1. Comment on confocal microscope.
2. What is isoelectric point?
3. Differentiate Active transport from passive transport.
4. What is conservative replication of DNA?
5. Comment on secondary messenger.
6. Define RNA editing.
7. Comment on RNA interference.
8. Mention the process of gene knock out and knock down.
9. Comment on the functions of co-repressor and co-activator.
10. What is apoptosis?

Part B

Answer any FOUR questions

(4×10=40 Marks)

11. Explain ion channels with reference to function.
12. Describe the rolling circular DNA replication with suitable example.
13. Give an account on the structure and function of ribosomes.
14. Explain RNA splicing.
15. Give an account on gene regulation in *lac operon*.
16. Explain gene transfer technologies.

Part C

Answer any TWO questions

(2×20=40 Marks)

17. Write an essay on chromatography.
18. Describe the process of DNA transcription in eukaryotes.
19. Discuss DNA damage and repair mechanisms in detail.
20. Explain the host pathogenic interaction.

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