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

Part A

Answer ALL the questions

- 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

- 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.

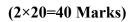
Part C

Answer any TWO questions

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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(4×10=40 Marks)

(10×2=20 Marks)

Max.: 100 Marks