



LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

B.Sc. DEGREE EXAMINATION – ADVANCED ZOOLOGY AND BIOTECHNOLOGY

FIFTH SEMESTER – NOVEMBER 2022

UAZ 5501 – MOLECULAR BIOLOGY

Date: 23-11-2022

Dept. No.

Max. : 100 Marks

Time: 09:00 AM - 12:00 NOON

PART - A

ANSWER ALL THE QUESTIONS

(10 x 2= 20 Marks)

1. What are the 3 steps in semi-conservative replication?
2. What do telomeres do with ageing?
3. Comment on transcription.
4. Define genetic code.
5. What is meant by split gene?
6. What causes exon shuffling?
7. Give an example for gene silencing?
8. Define Genomic imprinting.
9. What is the function of siRNA?
10. Define RNA interference.

PART – B

ANSWER ANY FOUR QUESTIONS

(4x10=40 Marks)

11. Describe the Salient features of double helical structure of DNA.
12. Give short notes on function of RNA Polymerase.
13. Write short notes on RNA Splicing.
14. Elaborate the *trp* operon with neat illustration.
15. Briefly explain the notes on Ribo-switches.
16. Enumerate the functions of RNA primer.

PART – C

ANSWER ANY TWO QUESTIONS

(2 x20 =40 Marks)

17. Elaborate the DNA Replication with neat illustration.
18. Discuss about the difference between prokaryotic and eukaryotic translation.
19. Enumerate the mRNA processing in eukaryotes.
20. Illustrate the Lac operon with neat diagram.

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