M.Sc. DEGREE EXAMINATION,APRIL 2020
I Year II Semester
Molecular Biology and Genetic Engineering

Time : 3 Hours **Max.marks :75**

Section A $(10 \times 2 = 20)$ Marks

Answer any **TEN** questions

1. Mention the role : Topoisomerase I and Topoisomerase II.
2. Define the Terms: Twist & Writhe.
3. Define Introns & Exons.
4. What is the role of RNA polymerase?
5. Expand: a) BAC b) YAC
6. What are conjugative plasmids?
7. What are the methods used to construct rDNA?
8. Restriction enzymes
9. What is DNA Fingerprinting?
10. Expand: a) AFLP b) RFLP
11. Chaperones
12. Comment on RT PCR.

Section B $(5 \times 5 = 25)$ Marks

Answer any **FIVE** questions

13. Distinguish between circular and superhelical DNA.
14. Describe the process of DNA replication.
15. Distinguish between Plasmid and Cosmid.
16. Write a note on importance of IPR and Patents.
17. Mention the principle and application of PCR.
18. Give an account on Chargaff's rule.
19. Write shortly on types of Blotting.

Section C $(3 \times 10 = 30)$ Marks

Answer any **THREE** questions

20. Discuss the structure of DNA.
21. Describe in detail about the mRNA.
22. Write an essay on plasmids and its types.
23. Explain in detail about Construction of genomic and cDNA libraries.
24. Elaborate the procedure RAPD and RFLP.

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