

**M.Sc. DEGREE EXAMINATION, NOVEMBER 2018**  
**I Year II Semester**  
**Core Elective**  
**GENETIC ENGINEERING AND MOLECULAR BIOLOGY**

**Time : 3 Hours**

**Max.marks :75**

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

Answer any **TEN** questions

1. Scope of molecular biology.
2. Z- DNA.
3. Introns.
4. Overlapping genes.
5. Gene markers.
6. Expression Vectors.
7. Cloning.
8. Patent.
9. Multiplex PCR.
10. Chromosome walking.
11. Chargaff's rule.
12. Ligase.

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

Answer any **FIVE** questions

13. Write short notes on the structure of RNA.
14. Brief about mismatch repair.
15. Write short notes on YAC.
16. List out the biosafety of GMO.
17. Distinguish between Northern and Southern blot techniques.
18. Outline the mechanism of DNA methylation.
19. Explain the basic principles and applications of PCR.

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

Answer any **THREE** questions

20. Explain in detail different types of DNA.
21. With the help of diagrams explain the process of transcription in eukaryotes.
22. Describe in detail about the vectors used in genetic engineering.
23. Describe the basic protocol for the construction of genomic library.
24. Write an essay on DNA fingerprinting technique and its applications.

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