

2025

5th Semester Examination (CCFUP : NEP)

BMLT

Paper : MI 5-T (Minor)



[Molecular Biology]

Full Marks : 40

Time : Two Hours

*The figures in the margin indicate full marks.
Candidates are required to give their answers
in their own words as far as practicable.*

Group - A

Answer any *five* questions : $2 \times 5 = 10$

1. What is meant by genome?
2. What is the key of Post-transcription modification and reverse transcription?
3. What is DNA repair?
4. What are start and stop genetic codons?
5. What is meant by point mutation?
6. Differentiate between DNA and RNA.
7. What are restriction endonucleases?
8. Why is EtBr used in agarose gel electrophoresis?

P.T.O.



(2)

Group - B

Answer any *four* questions :

5×4=20

9. Write about the different components of PCR master-mix.
10. Briefly discuss the structure and function of different types of RNA.
11. Differentiate between Southern blotting and Northern blotting.
12. Briefly describe the Central Dogma of molecular biology.
13. Differentiate between prokaryotic and eukaryotic transcription.
14. Where is codon and anti-codon used? What is Whoble phenomenon? 3+2

Group - C

Answer any *one* question :

10×1=10

15. What do you mean by conventional and real-time PCR? Discuss the diagnostic applications of real-time PCR. 5+5
 16. Write the basic steps of DNA extraction following a suitable methods.
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