



B.Sc./4th Sem (H)/BOT/24(CBCS)

2024

4th Semester Examination

BOTANY (Honours)

Paper : C 8-T

(Molecular Biology)

[CBCS]

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.*

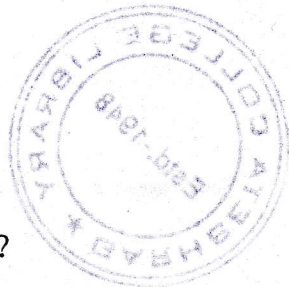
Group - A

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

1. What is infections inheritance?
2. What is 'Kornberg's enzyme'?
3. Mention two characteristic features of heterochromatin.
4. Why a primer is needed for DNA synthesis?
5. What is Wobble hypothesis of genetic code?
6. What is gene silencing?

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7. What is ribozyme?
8. What is the role of heat shock protein?

Group - B

Answer any *four* questions : 5×4=20

9. Distinguish between B and Z DNA on the basis of their nucleotide sequence and physical conformity.
10. Write a short note on adaptor hypothesis.
11. State the features of nucleosomal structure. Illustrate the solenoid model.
12. State two major modes of transcription termination.
13. Explain the regulation of inducible operon with example.
14. Describe the mRNA processing from hnRNA.

Group - C

Answer any *one* question : 10×1=10

15. Elucidate all steps of protein translation. Name two inhibitors of protein synthesis. 8+2
 16. Illustrate the process of group I and group II intron splicing. Draw tRNA with label. 6+4
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