



DBY-1603120102020600 Seat No. _____

M. Sc. (Biochemistry) (Sem. II) (CBCS) Examination

July - 2022

Molecular Biology : CBC-6

Time : $2\frac{1}{2}$ Hours]

[Total Marks : 70

1 Answer briefly any **seven** of the following questions : **14**

- (a) Discuss briefly about the DNA topoisomerase.
- (b) Define term : Promoter.
- (c) Mention the role of Sigma factors.
- (d) Define term : Consensus sequences.
- (e) What is hybrid vector ?
- (f) Give the full form of RFLP and ARDRA.
- (g) Define term : Vector and Phagemids.
- (h) Write any four application of DNA sequencing.
- (i) Define term : Operon.
- (j) Mention the significance of DNA replication.

2 Answer any two of the following questions : **14**

- (a) Give a detailed note on enzymes and proteins involved in DNA replication.
- (b) Write short note on Regulation of DNA replications.
- (c) Give a differences between Prokaryotic and Eukaryotic DNA replication.

3 (a) Write Detail note on LAC Operon. **7**

(b) Write note on Post Transcriptional Modification. **7**

OR

(a) Describe about the inhibitors of RNA synthesis. **7**

(b) Enlist the various methods of DNA sequencing. **7**
Explain any two in details.

- 4 Answer the following questions : 14
- (a) Write about the properties and application of Bacterial Artificial Chromosome (BAC).
 - (b) Write note on Western Blotting along with diagram.
- 5 Answer the following questions : (any two) 14
- (a) Discuss about the principle and application of Real Time PCRs.
 - (b) Write note on translation in Prokaryotes.
 - (c) Write about the methodologies and application of SSR and AFLP.
 - (d) Write short note on factors affecting PCR, applications and Precautions.
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