



PAS-003-013203

Seat No. _____

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

August - 2020

BT - 209 : Molecular Biotechnology - I

Faculty Code : 003

Subject Code : 013203

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

[Total Marks : 70

1 Answer the following : (Any Seven) 7×2=14

- (a) What is homopolymer tailing?
- (b) Write the function of DNA ligase.
- (c) Write the importance of plasmid in gene cloning.
- (d) Write the characteristics of expression vector.
- (e) How is a genomic library produced?
- (f) Write the application of microarray technique.
- (g) Enlist the step for plaque hybridization.
- (h) What is DNA marker?
- (i) What is micro and mini satellites?
- (j) Define restriction mapping.

2 Answer the following : (Any Two) 2×7=14

- (a) Write a short note on Restriction endonucleases.
- (b) Briefly describe bacteriophage vector.
- (c) Describe DNA modifying enzymes.

3 Answer the following : 2×7=14

- (a) Describe C-DNA synthesis & its cloning strategies.
- (b) Explain positional cloning in details.

OR

3 Answer the following : 2×7=14

- (a) Explain in brief probe preparation methods.
- (b) Write note on types of plasmid.

- 4 Answer the following : **2×7=14**
- (a) Explain western blotting technique with its applications.
 - (b) Explain In-situ chromosomal hybridization and its limitation.
- 5 Write the short on any **two** of the following : **2×7=14**
- (a) PCR technique
 - (b) RFLP
 - (c) DNA sequencing
 - (d) Antisense RNA technology.
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