

NOVEMBER/DECEMBER 2019

**MAM32 — RECOMBINANT DNA
TECHNOLOGY**

Time : Three hours

Maximum : 75 marks

SECTION A — (5 × 6 = 30 marks)

Answer ALL the questions.

1. (a) Write a brief note on linkers and adaptors used for creation of r-DNA.

Or

- (b) What are phages? How M_{13} used as cloning vector.

2. (a) Briefly describe about the principle and application of Agarose Gel electrophoresis.

Or

- (b) Write about the steps involved in Northern blotting technique.

3. (a) List out the enzymes involved in PCR techniques.

Or

- (b) Write a brief account on construction of Genomic DNA library.

4. (a) Describe about the gene expression analysis by EST.

Or

- (b) How Gene regulation by studied using DNA microarray technology.

5. (a) Briefly explain about creating a transgenic animal.

Or

- (b) Explain about protein array and their applications.

SECTION B — (3 × 15 = 45 marks)

Answer any THREE questions.

6. Write a detailed account on the methods of selection and screening of clones.
7. Give an elaborate account on methods of Isolation and purification of DNA.

8. What is C-DNA? How to construct C-DNA library? Add note on enzymes involved in C-DNA construction.

9. Discuss in detail about DNA sequencing by enzymatic methods. Add notes on STS mapping.

10. Elucidate the methods of synthesis of Hepatitis B Vaccine and Interferon using r-DNA technology.