

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.