



**PAS-003-1132003**

Seat No. \_\_\_\_\_

**M. Sc. (Biotech) (Sem. II) (CBCS) Examination**

**August - 2020**

**BT - 208 : Molecular Biotechnology - I**

**Faculty Code : 003**

**Subject Code : 1132003**

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

[Total Marks : 70

- 1 Answer the following : (Any **Seven** out of Ten, each of 02 marks) 14
- (1) Enlist the types of DNA modifying enzyme.
  - (2) What specific properties of type-II endonuclease make them useful in gene cloning?
  - (3) What are the essential features of a vector?
  - (4) What is recognition site?
  - (5) What is RNAi?
  - (6) How would you differentiate fingerprinting DNA fingerprinting?
  - (7) What are micro- satellites?
  - (8) What is DNA denaturation and renaturation?
  - (9) What are mini -Satellites?
  - (10) What is screening?
- 2 Answer the following : (Any **Two** out of Three, each of 07 marks) 14
- (a) Discuss adaptors and linkers in detail.
  - (b) Explain Restriction enzyme in detail.
  - (c) Write a note on DNA modifying enzyme.
- 3 Answer the following : (Each of 07 marks) 14
- (a) Give characteristic features of shuttle expression vectors.
  - (b) Explain BACs and YACs in detail.

**OR**

- 3** Answer the following : (Each of 07 marks) **14**
- (a) Write a note on chromosomal walking.
  - (b) Explain positional cloning in detail.
- 4** Answer the following : (Each of 07 marks) **14**
- (a) Explain various techniques used for screening of expressed genomes.
  - (b) Explain Blotting techniques.
- 5** Answer the following : (Any **Two** out of four, each of 07 marks) **14**
- (a) Write a note on PCR.
  - (b) Write in detail applications of genetic engineering.
  - (c) Write a note on RFLP.
  - (d) What is DNA fingerprinting? Explain.
-