



( 2 )

Write short notes on the following :

- (a) Genetic engineering guidelines
- (b) Restriction enzymes

**Unit-II**

- 3. Explain alternative strategies of gene cloning mentioning their applications.

**OR**

Write short notes on the following :

- (a) Chemical synthesis of DNA primers and Linkers
- (b) Reverse transcription

**Unit-III**

- 4. Write a brief note on Protein engineering and mention its applications.

**OR**

Write short notes on the following :

- (a) Expression in insects and insect cells
- (b) S1 mapping

**Unit-IV**

- 5. Give a brief note on characterization and stabilization of recombinant proteins.

**OR**

Write short notes on the following :

- (a) Targeted gene replacement
- (b) Gene augmentation