

2203000206026001
EXAMINATION FEBRUARY-MARCH 2024
BACHELOR OF SCIENCE (SIXTH SEMESTER)
MICROBIOLOGY-XVII (MB-601-GENETIC ENGINEERING)
-LEVEL 2

[Time: As Per Schedule]

[Max. Marks: 50]

Instructions:

1. Fill up strictly the following details on your answer book

- a. Name of the Examination : **BACHELOR OF SCIENCE (SIXTH SEMESTER)**
- b. Name of the Subject : **MICROBIOLOGY-XVII (MB-601-GENETIC ENGINEERING)-LEVEL 2**
- c. Subject Code No : **2203000206026001**

2. Sketch neat and labelled diagram wherever necessary.
3. Figures to the right indicate full marks of the question.
4. All questions are compulsory.

Seat No:

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Student's Signature

Q.1 Give the specific answers

8

- a. Which enzymes are used to digest plant cell wall during protoplast fusion?
- b. Write the full form of PCR.
- c. What is the role of restriction endonuclease in Gene cloning?
- d. Give two examples of cloning vectors.
- e. Name the enzyme used for cDNA preparation.
- f. What are the competent cells?
- g. What features would be displayed by the ideal insecticide?
- h. Elaborate STRS and SNPs.

Q.2 Explain/comment on ANY TWO of the following. 14

- a. Comment on - "Certain products produced by Genetic Engineering are of having great pharmaceutical value/"
- b. Explain Colony and Plaque hybridization methods.
- c. justify: DNA analysis plays an important role in the identification of crime suspects

Q.3 Answer the following [ANY TWO]: 14

- a. Describe the various steps involved in Gene cloning with the help of a well labelled diagram.
- b. Discuss pBR322 vector in detail.
- c. Write a detailed note on Construction of cDNA library.

Q.4 Write short note on ANY TWO of the following. 14

- a. Properties of good vector
- b. Phagemid vectors
- c. The δ -endotoxins of *Bacillus thuringiensis*
