



RAN - 2203000206026001

**RAN-2203000206026001**

**T.Y.B.Sc. (Sem. 6) Examination September - 2023**

**Microbiology MB - 601**

**Genetic Engineering**

**Time: 2 Hours ]**

**[ Total Marks: 50**

**सूचना : / Instructions**

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नीचे दशविवेक निशानीवाणी विगतो उत्तरवली पर अवश्य लपववी.  
**Fill up strictly the details of signs on your answer book**

Name of the Examination:

T.Y.B.Sc. (Sem. 6)

Name of the Subject :

Microbiology MB - 601 Genetic Engineering

Subject Code No.: 2203000206026001

Seat No.:

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Student's Signature

- (2) Figures to the right indicate full marks of the question.  
(3) Draw neat and labelled diagrams whenever necessary.

**Q.1. Give Specific answers:**

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- What is somaclonal variation? State its application
- Define Protoplast fusion. Write its importance.
- What are restriction endonucleases? Enlist its types.
- What are Phagemid and Phasmid vectors?
- What is colony hybridization? Write its importance.
- What is somatostatin and somatotrophin?

**Q.2 Explain/comment on any two of the following :**

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- Gene cloning requires multiple steps.
- Cosmid vectors can be used in genetic engineering.
- Colony and plaque hybridization have applications in genetic engineering.

- Q.3. Discuss any two of the following: 16**
- a. Write a detailed note on pBR322 as a vector.
  - b. Discuss the steps of construction of genomic library.
  - c. Describe in detail: Plants make their own insecticides.

- Q.4. Write short notes on any two of the following: 10**
- a. Conventional breeding technique.
  - b. Insertion of phage DNA.
  - c. Recombinant insulin.
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