



# RAN-1028

## T.Y.B. Sc. Microbiology SEM-V Examination

March / April - 2019

### MB 13: rDNA Technology

Time: 2 Hours ]

[ Total Marks: 50

#### સૂચના : / Instructions

નીચે દર્શાવેલ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી.  
Fill up strictly the details of signs on your answer book

Name of the Examination:

T.Y.B. Sc. Microbiology SEM-V

Name of the Subject :

MB 13 : rDNA Technology

Subject Code No.: 1 0 2 8

Seat No.:

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Student's Signature

1. Figures to the right indicate full marks of the question.
2. Draw neat and labelled diagrams whenever necessary.

#### Q.1 Give Specific answers.

12

- a. What is nucleic acid hybridization?
- b. State the significance of modification enzyme.
- c. What are reporter genes? Give two examples.
- d. What is knockout mutation?
- e. Define shuttle vectors with suitable example.
- f. Enlist four recombinant therapeutic proteins.

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

12

- a. Characteristics of PUC19 makes it suitable cloning vector.
- b. Explain site directed mutagenesis.
- c. Explain cleanup of radioactive environments and organophosphate pesticide.

**Q3. Discuss any two of the following. 16**

- a. Give a detail account on various hosts for cloning vectors.
- b. Describe Ti plasmid in detail.
- c. Describe the production of recombinant vaccine.

**Q.4 Write short notes on any two of the following. 10**

- a. Nucleic acid hybridization and Southern Blot.
  - b. Expression vectors.
  - c. Bacillus thuringiensis based biopesticides
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