



RAN-2203000205026001

T.Y.B.Sc. (Sem. - V) Examination October - 2025

MB-501 : Principles Of Bacterial Genetics - Old

Time: 2 Hours]
[Total Marks: 50
સૂચના : / Instructions

- (1) ઉપરોક્ત દર્શાવેલ વિગતો ઉત્તરવહી પર અવશ્ય લખવી.
Fill up strictly the above details on your answer book
- (2) All the questions are compulsory
- (3) Figures to the right indicate the marks of questions
- (4) Figures to the right indicate the marks of questions. Give/Draw diagram whenever necessary.

Seat No.:

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Student's Signature

Q. 1 Answer the following questions
[08]

- a) What are intercalating agents?
- b) Explain poly-cistronic and mono-cistronic m-RNAs with diagrams.
- c) What is the effect of excess Tryptophan on the operator?
- d) What is nucleosome? Explain in brief.
- e) Explain the terms: A) Episomes B) Plasmid.
- f) What is competent cell?
- g) Which codons are involved in termination of translation?
- h) Define Mutation and mutagen.

Q. 2 Explain/Comment ANY TWO of the following:
[14]

1. Write details on: Genetic codons.
2. Regulation of translation is a necessary process - Explain.
3. Give a summary on various experiments were performed by scientists to prove that DNA acts as a genetic material.

Q. 3 Discuss ANY TWO of the following:
[14]

1. Define replication. Describe major events occur at replication fork.
2. Give detailed account on t-RNA and r-RNA genes.
3. Elaborate on Transposable elements.

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

1. The lactose operon.
2. Termination of DNA replication
3. Generalized Transduction