



# RAN-0940

## B. Sc. (Medical Technology) (Semester-IV) Examination

March / April - 2019

### MT 08: Microbial Metabolism in Genetics (New Syllabus)

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:

B. Sc. (Medical Technology) (Semester-IV)

Name of the Subject :

MT 08: Microbial Metabolism in Genetics (New Syllabus)

Subject Code No.: 0 9 4 0

Seat No.:

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Student's Signature

#### Instructions:

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

#### Q-1 Answer the following:

[08]

- (1) Differentiate between mechanism of action of Helicase and Telomerase in the process of replication.
- (2) Define: Transition and transversion mutation.
- (3) Give the arrangement of four major complexes involved in transporting electrons to ultimate electron acceptor in Electron Transport Chain.
- (4) What is central dogma of life?

#### Q-2 Explain the following: (any two)

[14]

- (1) Explain in detail the regulation of gene expression with reference to lactose.
- (2) Describe briefly about DNA Polymerase III Holoenzyme of prokaryotes.
- (3) Differentiate between generalized and specialized transduction.

**Q-3 Answer the following in detail: (any two) [14]**

- (1) Explain in detail the characteristic features of genetic code.
- (2) What is horizontal gene transfer? Explain conjugation in detail.
- (3) Describe six major principles by which biosynthetic pathways are organized.

**Q-4 Write short notes on: (any two) [14]**

- (1) Antibiotic resistance in bacteria.
  - (2) Fermentation.
  - (3) Anabolism Vs Catabolism.
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