



RAN - 2003001105020004

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B. Sc. (Biotechnology) (Sem. - V) Examination March - 2023

Introduction to Molecular Biology - II

Time: 2 Hours]

[Total Marks: 50

સૂચના : / Instructions

- (1) 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. (Biotechnology) (Sem. - V)**
- Name of the Subject :
☛ **Introduction to Molecular Biology - II**
- Subject Code No.: **2003001105020004**

Seat No.:

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Student's Signature

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

Q-1: Answer in short Any Eight:

(8)

- Shine-Dalgarno sequence
- Sigma Factor
- Non sense codon
- Replicon
- Antisense RNA
- Attenuation
- Corepressor
- Inducer
- Pribnow box
- Mono and Poly cistronic mRNAs

Q-2: Attempt Any Two: (14)

- (a) Discuss major events at 'Transcription bubble' and initiation of transcription in bacteria.
- (b) Explain different ways of termination of transcription in bacteria.
- (c) Elaborate the events occurring at initiation of transcription in eukaryotes.

Q-3: Explain in detail Any Two: (14)

- (a) Characteristics and function of Sec and Tat protein secretion systems.
- (b) Explain in detail the regulation of *lac* operon by regulatory proteins.
- (c) Explain the functioning of two components regulatory and phosphorelay systems.

Q-4: Attempt Any Two of the following: (14)

- (a) Translation in Prokaryotes.
 - (b) Regulation by Riboswitches.
 - (c) Sporulation in *Bacillus*.
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