RAN-2003001104020003

RAN-2003001104020003

M.Sc. (Int. Biotechnology) (Sem. IV) Examination April - 2023

BT-10 : Introduction to Molecular Biology-1

Time: 2 Hours] **[Total Marks: 50**

સૂચના : / Instructions

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

Name of the Examination:

☛ **M.Sc. (Int. Biotechnology) (Sem. IV)**

Name of the Subject :

☛ **BT-10 : Introduction to Molecular Biology-1**

Subject Code No.: **2003001104020003**

Seat No.:

Student's Signature

Q-I. Define Briefly (Any Four) **[08]**

a) Pattern of DNA synthesis in bacteria

b) Completion of lagging strand synthesis in bacteria

c) DNA ligase reaction in replication

d) Auxotrophs and Prototrophs

e) Forward, Reversion & Supressor Mutation

Q2. Explain the following (Any Two) **[14]**

a) What is replisome? Discuss the role of different proteins present in replisome.

b) Major events occurring at replication fork during replication in E.coli.

c) Mechanism of DNA replication in Eukaryotes

Q3. Answer in detail (Any Two) **[14]**

a) Differentiate between Spontaneous and Induced Mutation by giving examples

b) Explain any four types of point mutation in protein coding genes

c) Why is horizontal gene transfer in bacteria important?

Q4. Attempt Any Two of the following **[14]**

a) Explain: Transposable Elements

b) What are the basic steps in mapping a genome?

c) How transformation is differed from conjugation? Justify by giving examples.
