Roll No. | | | | | | | | | | | | Total No. of Pages : 02

Total No. of Questions : 09

B.Sc. (Microbiology) (Sem.–2)

MOLECULAR BIOLOGY

Subject Code : BSMB-205-19

M.Code : 79876

Date of Examination : 08-07-22

Time : 3 Hrs. Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.**
3. **SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.**

SECTION-A

1. Write briefly :

a) What is TATA box and its significance?

b) What is replicative transposition?

c) Describe the structure of 30 nm chromatid.

d) What causes frameshift mutations in DNA?

e) What is the role of releasing factor in transcription?

f) Write different types of DNA with their functions.

g) What do you mean by extra- embryonic membranes?

h) What is repressor protein?

i) How does erythromycin work as an antibiotic?

j) What are the functions of RNA polymerase?

SECTION-B

2. Give the nature and properties of genetic code.

3. Discuss the role of ribosome in translation.

4. What do you mean by siRNA and miRNA and its significance.

5. What are histone and non-histone proteins and their role?

6. Illustrate the photoreactivation and excision repair mechanism.

SECTION C

7. Explain the prokaryotic gene expression in relation to Lac operon.

8. Explain the transcription in prokaryotes.

9. Discuss the spontaneous and induced mutations. What are their applications in biotechnology?

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.