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

Total No. of Questions : 11

M.Sc (Medical Microbiology) (Sem.-2)

ELEMENTS OF MOLECULAR BIOLOGY

Subject Code : MMB-204-21

M.Code : 92127

Date of Examination : 19-12-22

Time : 3 Hrs. **Max. Marks : 70**

INSTRUCTIONS TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains EIGHT questions carrying FIVE marks each and students have to attempt any SIX questions.**
3. **SECTION-C will comprise of two compulsory questions with internal choice in both these questions. Each question carries TEN marks.**

SECTION-A

1. Write a brief note on the following :

a) Genetic code

b) SOS repair

c) Ti- plasmid

d) Give any two difference between them RNA formed in prokaryotes and eukaryotes.

e) Briefly explain wobble hypothesis.

f) Which DNA polymerase play role in excision repair.

g) Frame shift.

h) Which enzyme is required for maintaining the length of chromosomes in eukaryotes?

i) Give significance of eukaryotic release factor in translation

j) Why is the genetic code ‘‘degenerate’’?

SECTION-B

2. Explain briefly tryptophan operon and its regulation.

3. Discuss Rho dependent termination of transcription in prokaryotes.

4. Write a brief note on genetic variability.

5. How many types of structural changes occur in chromosomes leading to mutation?

6. Explain briefly the process of replication of plasmid DNA.

7. Explain the eukaryotic Transcription initiation Factors along with their functions.

8. Enumerate the various differences between prokaryotic and eukaryotic translation.

9. Describe the salient features of genetic code.

SECTION-C

10. Discuss the regulation of transcription initiation by Activators.

OR

Give the steps involved in elongation phase of translation. Explain any two steps in detail.

11. Describe the sequence of events during DNA replication in eukaryotes and explain the role of various enzymes.

OR

Write a brief note on Genetic recombination in bacteria.

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