

Roll No. :

Total No. of Questions : 16]

[Total No. of Printed Pages : 3

EMIC-125

M.Sc. (Ist Semester) Examination, Jan.-2023

MICROBIOLOGY

Paper - FS-MIC-CC-103

(Molecular Biology)

Time : 3 Hours]

[Maximum Marks : 40

The question paper contains three Sections.

Section-A

(Marks : 1 × 10 = 10)

Note :- The candidate is required to answer all the *ten* questions carries 1 mark each. The answer should not exceed **50** words.

Section-B

(Marks : 3 × 5 = 15)

Note :- The candidate is required to answer *five* questions by selecting at least *one* question from each Unit. Each question carries **3** marks. Answer should not exceed **200** words.

Section-C

(Marks : 5 × 3 = 15)

Note :- The candidate is required to answer *three* questions by selecting *one* question from each Unit. Each question carries **5** marks. The answer should not exceed **500** words.

BRI-964

(1)

EMIC-125 P.T.O.

Section–A

1. (i) Define coding DNA.
- (ii) What is Genetic code ?
- (iii) Define heat shock protein.
- (iv) What is ara operon ?
- (v) Explain CAMP.
- (vi) What is Super Coiling of DNA ?
- (vii) Difference between Prokaryotic and Eukaryotes.
- (viii) Write types of Transposons.
- (ix) What is DNA Template ?
- (x) Name the elements found in chemical analysis of bacteria.

Section–B

Unit–I

2. Write down about the 3-D structure of DNA.
3. Explain repetitive DNA sequences.
4. Write in packaging of DNA in Prokaryotic and Eukaryotes.

Unit–II

5. Differentiate between Prokaryotes and Eukaryotes Translation.
6. Explain reverse transcription.
7. Write a short note on Genetic code.

Unit-III

8. Write a short note on DNA binding sites.
9. Write a short note on Lac Operon.
10. Explain PPGPP (P).

Section-C

Unit-I

11. Write an essay on DNA denaturation and renaturation.
12. Write in detail mechanism of Transposition.

Unit-II

13. Write down the Transcription in Eukaryotes.
14. Describe the translation in Prokaryote.

Unit-III

15. Write an essay in positive and negative regulation.
16. Describe the regulating mechanism of small molecules.