Reg. No. : .....

Name : .....

K21U 0889

IV Semester B.Sc. Degree (CBCSS–Sup./Imp.) Examination, April 2021
(2014-'18 Admissions)
GENERAL COURSE IN MICROBIOLOGY
4A13 MCB : Molecular Biology

Time : 3 Hours

Max. Marks : 40

Instruction : *Draw diagrams wherever necessary.*

SECTION – A

Answer **all** questions. **Each** question carries **1** mark.

1. The organism used by F.Griffith for his transformation experiments was _____.
2. The discontinuous synthesis of lagging strand takes place during DNA replication because the DNA polymerases are unable to synthesize DNA in _____ direction.
3. The amino acid initiating translation process in prokaryotes is _____.
4. The inducer for the expression of lac operon is _____. **(4×1=4)**

SECTION – B

Answer **any seven** questions. **Each** question carries **2** marks.

5. Harshey-Chase experiment.
6. Semiconservative mode of replication.
7. Nucleotide.
8. D-loop replication.

P.T.O.

9. RNA dependent DNA polymerases.
10. Wobble hypothesis.
11. Differences between prokaryotic and eukaryotic mRNAs.
12. Attenuation.
13. tRNA.
14. Genetic recombination. **(7×2=14)**

SECTION – C

Write short notes on **any four** of the following. **Each** question carries **3** marks.

15. Organization of eukaryotic chromatin.
16. Prokaryotic DNA polymerases.
17. Genetic code.
18. Organization of trp operon.
19. Post translational processing of polypeptides.
20. Types of DNA. **(4×3=12)**

SECTION – D

Write essays on **any two** of the following. **Each** question carries **5** marks.

21. Write on experimental proof of DNA as genetic material. Describe the structure of DNA.
22. Describe the mechanism of DNA replication in prokaryotes.
23. Discuss the mechanism of translation in prokaryotes.
24. What is an operon ? Discuss the organization and regulation of lac operon. **(2×5=10)**