



K20U 0888

Reg. No. :

Name :

IV Semester B.Sc. Degree (CBCSS-Reg./Sup./Imp.) Examination, April 2020
(2014 Admn. Onwards)
GENERAL COURSE IN MICROBIOLOGY
4A13MCB : 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 for demonstration of DNA as genetic material in Harshey-Chase experiment was _____
2. During DNA replication the lagging strand synthesis takes place discontinuously in pieces called _____
3. The key enzyme involved in photoreactivation repair of DNA is _____
4. The process of synthesis of RNA using DNA template by RNA polymerase is called _____ (4×1=4)

SECTION – B

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

Comment on the following :

5. Transforming principle.
6. Nucleoside.
7. Topoisomerase.
8. 'Hogness Box'.
9. Wobble hypothesis.

P.T.O.



10. Polyribosomes.
11. Central dogma of molecular biology.
12. Universality of genetic code.
13. Aminoacyl synthetase.
14. Operon.

(7×2=14)

SECTION – C

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

15. Nucleosome.
16. Enzymes and proteins involved in DNA replication.
17. Structure of prokaryotic and eukaryotic ribosomes.
18. Genetic code.
19. Meselson-Stahl experiment.
20. Post translational modification of polypeptides.

(4×3=12)

SECTION – D

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

21. With the help of a suitable diagram describe the structure of DNA. Write on characteristics of different types of DNA.
22. Write a note on DNA repair mechanism.
23. Write a note on different types of RNAs. Describe the process of transcription in prokaryotes.
24. Describe the structural organization and regulation of lac operon in *E. coli*.

(2×5=10)
