Reg. No. : ....

Name : ....

II Semester B.Sc. Degree (CCSS – Supplementary) Examination, April 2019
(2013 and Earlier Admissions)
CORE COURSE IN MICROBIOLOGY
2B02 MCB : Biophysics and Bioinformatics

Time : 3 Hours   Max. Weightage : 40

Instruction : *Draw diagrams* **wherever** *necessary.*

SECTION – A

Answer briefly on **any ten** questions. **Each** question carries **2** weight :

1. What are the factors affecting adsorption ?

2. What is dialysis ?

3. What are colloids ?

4. Compare structural organization of B and Z DNAs.

5. Write on rRNAs.

6. What is Calomel electrode ?

7. What is reverse Hoogsteen base pairing ?

8. What are the functions of omega loops ?

9. Write on phospholipids.

10. What are porins ?

11. What is the influence of hypotonic solution on cells ?

12. What are the applications of bioinformatics ?

13. What is sequence retrieval system ?

14. Differentiate sequence homology and sequence similarity.

15. What is proteomics ?   (10×2=20)

SECTION – B

Write short notes on **any four** questions. **Each** question carries **5** weight :

16. Discuss the mechanisms of transport of molecules across the biological membranes.

17. Write a note on conformation of oligosaccharides and polysaccharides.

18. Describe the structure of tRNA.

19. Describe hydrogen bond and structure of water.

20. Discuss the use of bioinformatics tools in drug designing.

21. Discuss the use of bioinformatics in protein structure prediction.
                                                                  (4×5=20)

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