

**B.Sc.DEGREE(CBCS)EXAMINATION, DECEMBER 2018****First Semester****Complementary Course - BC1CMT01 - BIOCHEMISTRY-ELEMENTARY BIOCHEMISTRY**

(Common to B.Sc Biological Techniques and Specimen Preparation Model III, B.Sc Biotechnology Model III, B.Sc Botany and Biotechnology Model III Double Main, B.Sc Botany Model I, B.Sc Botany Model II Environmental Monitoring And Management, B.Sc Botany Model II Food Microbiology, B.Sc Botany Model II Horticulture and Nursery Management, B.Sc Botany Model II Plant Biotechnology, B.Sc Microbiology Model III, B.Sc Zoology and Industrial Microbiology Model III Double Main, B.Sc Zoology Model I, B.Sc Zoology Model II Aquaculture, B.Sc Zoology Model II Food Microbiology, B.Sc Zoology Model II Medical Microbiology)

2018 Admission only

F6CA1138

Maximum Marks: 60**Time: 3 Hours****Part A**Answer any **ten** questions.Each question carries **1** mark.

1. Draw the structure of a water molecule.
2. State Henderson-Hasselbalch equation.
3. Define antiport system of solute transport
4. Name two phenomena involving Donnan equilibrium in biological systems.
5. Mention the products of photosynthesis.
6. What is a grana?
7. Define cyclic photophosphorylation.
8. Give the name of the enzyme responsible for biological nitrogen fixation.
9. Comment on retention time in chromatography
10. Name an analytical technique to detect specific proteins
11. Expand the term AGE.
12. Name the technique used to transfer proteins from gel on to a membrane.

(10×1=10)

Part BAnswer any **six** questions.Each question carries **5** marks.

13. Explain the mechanism for regulation of extracellular fluid pH.



14. Explain the different types of membrane proteins with examples.
15. Compare C3 and C4 pathway.
16. Explain the principle of colorimetry.
17. Outline the parts of a spectrophotometer.
18. Discuss the applications of HPTLC.
19. Explain the techniques of southern blotting.
20. Describe western blotting.
21. Elaborate on MALDI TOF MS.

(6×5=30)

Part C

Answer any **two** questions.
Each question carries **10** marks.

22. Discuss ionisation of water and explain ionic product of water
23. Explain the Structure and functions of cell membrane.
24. Explain the major secondary metabolites and their functions in plants.
25. Give a detailed account on electrophoresis.

(2×10=20)