



QP CODE: 21102461



21102461

Reg No :

Name :

B.Sc DEGREE (CBCS) EXAMINATIONS, OCTOBER 2021

First Semester

Complementary Course - BC1CMT01 - BIOCHEMISTRY-ELEMENTARY

BIOCHEMISTRY

(Common to 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 Zoology Model I, B.Sc Zoology Model II Aquaculture, B.Sc Zoology Model II Food Microbiology, B.Sc Zoology Model II Medical Microbiology, 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 Microbiology Model III, B.Sc Zoology and Industrial Microbiology Model III Double Main)

2017 Admission Onwards

EF2D3DFD

Time: 3 Hours

Max. Marks : 60

Part A

*Answer any **ten** questions.*

*Each question carries **1** mark.*

1. What is a strong acid? Give an example.
2. Name the major buffer present in intracellular fluids.
3. Why membranes are called semipermeable?
4. What are peripheral membrane proteins?
5. Name the raw materials necessary for photosynthesis.
6. Define light reactions of photosynthesis.
7. Define C4 pathway.
8. Name two C4 plants.
9. Name an analytical technique to detect specific proteins
10. Define AGE.
11. Write down the principle of western blotting.
12. Expand MALDI-TOF-MS.





(10×1=10)

Part B

*Answer any **six** questions.*

*Each question carries **5** marks.*

13. Write notes on interactions in aqueous systems.
14. Give an account on permeability of biological membranes.
15. Elaborate on biological nitrogen fixation.
16. Define Beer Lamberts Law. Comment on its significance and applications.
17. Write notes on spectrophotometry.
18. Give the techniques of HPTLC.
19. Discuss gel filtration chromatography.
20. Explain the principles and applications of PAGE
21. Describe Southern Blotting in detail.

(6×5=30)

Part C

*Answer any **two** questions.*

*Each question carries **10** marks.*

22. Derive Henderson Hasselbalch and explain its importance.
23. Enumerate the role of Donnan membrane equilibrium and their application in biological system.
24. Elaborate on plant metabolites and their significance.
25. Discuss the principle, procedure and applications of a) Western blotting b) Northern blotting

(2×10=20)

