23104660

QP CODE: 23104660

Reg No : .....

Name : .....

B.Sc DEGREE (CBCS) REGULAR/IMPROVEMENT/REAPPEARANCE EXAMINATIONS, FEBRUARY 2023

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

143878BD

Time: 3 Hours Max. Marks : 60

Part A

*Answer any **ten** questions.*

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

1. Comment on ionization of a weak base.
2. What is the composition of an acidic buffer? Give one example.
3. Define amphitropic proteins.
4. List any two applications of Donnan membrane equilibrium in biological systems.
5. Define photosynthesis.
6. Expand RUBISCO.
7. Mention the significance of PEP carboxylase in C4 plants.
8. What are primary metabolites?
9. State the principle of spectrophotometry.

10. Recall two applications of AGE.

11. Name the technique used to transfer DNA from gel on to a membrane.

12. Give any two applications of proteomics.

(10×1=10)

Part B

*Answer any **six** questions.*

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

13. Derive Henderson-Hasselbalch equation.

14. Describe amphipathic nature of plasma membrane.

15. Describe non cyclic photophosphorylation.

16. Discuss colorimetry.

17. Explain molecular exclusion chromatography.

18. Elaborate on Affinity Chromatography.

19. Write notes on PAGE.

20. Describe western blotting.

21. Write notes on western blotting.

(6×5=30)

Part C

*Answer any **two** questions.*

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

22. Give a detailed account on interactions in an aqueous system.

23. Elaborate on solute transport across membranes.

24. Explain in detail the structure of chloroplast and elaborate on the two stages of photosynthesis.

25. Give a detailed account on chromatography.

(2×10=20)