QP CODE: 19103061

Reg No : .....

Name : .....

B.Sc.DEGREE(CBCS)EXAMINATION, NOVEMBER 2019

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)

2017 Admission Onwards

5442EFEF

Time: 3 Hours Maximum Marks :60

Part A

Answer any ten questions.

Each question carries 1 mark.

1. Define a covalent bond.
2. State ionic product of water.
3. Name different types of membrane proteins.
4. Define Active transport.
5. What are thylakoids?
6. Show a schematic representation of C4 pathway.
7. What is the function of Nitrate reductase in biological nitrogen fixation.
8. How do secondary metabolites protect the plants from predators?
9. Mention two applications of TLC.
10. Note down two applications of affinity chromatography.
11. Enumerate the principle of PAGE.
12. Name the different types of blotting techniques and the type of molecules analysed using each method.

(10×1=10)

Part B

*Answer any **six** questions.*

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

13. How blood pH is regulated in our body?
14. Discuss significance of Donnan membrane equilibrium in biological systems.
15. Differentiate between cyclic and noncyclic photophosphorylation.
16. Elaborate on the procedure of colorimetry.
17. Explain spectrophotometry.
18. Explain molecular exclusion chromatography.
19. Elaborate on AGE.
20. Outline the general procedure for blotting technique.
21. Write notes on western blotting.

(6×5=30)

Part C

*Answer any **two** questions.*

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

22. Write notes on a) pH b) Buffer c) Henderson- Hasselbalch equation.
23. Explain fluid mosaic model of membrane and the different membrane proteins with suitable diagrams.
24. Explain basics of photosynthesis along with the pigments associated with it.
25. Discuss the basic principles of proteomics. Explain MALDI TOF MS.

(2×10=20)