QP CODE: 22103135

22103135

Reg No : .....

Name : .....

B.Sc DEGREE (CBCS) REGULAR / IMPROVEMENT / REAPPEARANCE EXAMINATIONS, OCTOBER 2022

Second Semester

Complementary Course - BC2CMT02 - BIOCHEMISTRY- BIOMOLECULES

(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 and Biotechnology 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, B.Sc Zoology and Industrial Microbiology Model III Double Main, B.Sc Biological Techniques and Specimen Preparation Model III ,B.Sc Botany Model II Plant Biotechnology ,B.Sc Biotechnology Model III ,B.Sc Microbiology Model III)

2017 ADMISSION ONWARDS

7DC371EE

Time: 3 Hours Max. Marks : 60

Part A

*Answer any **ten** questions.*

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

1. What is anomeric carbon?
2. Draw the structure of Mannose.
3. Comment on Heparin.
4. Give any two functions of lipids.
5. Write the structure of oleic acid.
6. Name the alcohol present in sphingomyelin.
7. What is the significance of acid number?
8. Give the one letter code for glutamic acid.
9. Give the names of any two secondary structures found in proteins.
10. What do 5' and 3' mean?
11. What is meant by complementary base pairing in DNA?

12. Mention the importance of Tm value.

(10×1=10)

Part B

*Answer any **six** questions.*

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

13. Is epimerization reversible or not? Briefly justify your statement with suitable schematic representation.

14. Explain reducing action of sugar with example.

15. Classify the carbohydrates. Draw the structure of monosaccharides and disaccharides with example.

16. Write down the structure and functions of triacylglycerol.

17. Write the structure and functions of cholesterol.

18. Give the important functions of proteins.

19. Briefly exlplain the structure of collagen.

20. Contrast the structure of pyrimidine with that of purines.

21. Discuss the functions of different types of RNAs present in a cell.

(6×5=30)

Part C

*Answer any **two** questions.*

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

22. Explain the structure, properties and function of homopolysaccharide - starch,glycogen,cellulose and chitin.

23. Briefly explain about the structure and functions of phospholipids and sphingolipids .

24. Elaborate the structural levels of proteins.

25. Compare and contrast the B and Z forms of DNA.

(2×10=20)