

D 53637

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Name.....

Reg. No.....

**FIRST SEMESTER (CBCSS—UG) DEGREE EXAMINATION
NOVEMBER 2023**

Biochemistry

BCH 1C 01—BIOCHEMISTRY—I

(2020—2023 Admissions)

Time : Two Hours

Maximum : 60 Marks

Section A*Answer all questions.**Each question carries 1 mark.*

1. The organelle in which photosynthesis takes place :
 - a) Mitochondria.
 - b) Chloroplast.
 - c) Ribosome.
2. Which among the following is not a nonpolar amino acid ?
 - a) Leucine.
 - b) Tryptophan.
 - c) Aspartic acid.
3. An epimer of galactose is :
 - a) Glucose.
 - b) Mannose.
 - c) Xylose.
4. Write down Fehling's reaction.
5. What do you mean by zwitter ion ?
6. Define saponification number.
7. Write down the structure of β D fructofuranose.
8. Write down the principle of Biuret reaction ?
9. Name one nonreducing sugar.

(9 $\times$ 1 = 9 marks)**Turn over**

Section B

*Answer any **seven** questions.
Each question carries 3 marks.*

10. Briefly outline the Miller and Urey experiment.
11. Draw the structures of maltose and lactose and name the glycosidic bond.
12. Draw the structure of hyaluronic acid and mark the glycosidic bonds. Write down its important function.
13. Draw the structure of a dipeptide and mark the peptide bond
14. Write a note on the denaturation and renaturation of proteins
15. Explain mutarotation.
16. Explain diagrammatically the structure of tRNA.
17. What is Rancidity ?

(7 × 3 = 21 marks)

Section C

*Answer any **four** questions.
Each question carries 5 marks.*

18. Describe the different levels of structural organization of proteins.
19. Draw the primary structure of a DNA molecule with five nucleotides. Show the different types of bonds.
20. Name the important plant sterols. Note down the structures.
21. What are the salient features of the Watson and Crick model of DNA.
22. Write down the structural relationship of aldoses of D series starting with D glyceraldehyde.

(4 × 5 = 20 marks)

Section D

*Answer any **one** question.
It carries 10 marks.*

23. Discuss the classification of polysaccharides. Explain with structures.
24. Classify lipids. Write down the examples of each class with structures.

(1 × 10 = 10 marks)