

D 113887

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Name.....

Reg. No.....

**FIRST SEMESTER (CBCSS—UG) DEGREE EXAMINATION
NOVEMBER 2024**

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. An epimer of glucose is :
 - (a) Mannose.
 - (b) Sucrose.
 - (c) Fructose.
2. An aromatic amino acid is :
 - (a) Leucine.
 - (b) Tyrosine.
 - (c) Aspartic acid.
3. The power house of the cell is :
 - (a) Ribosome.
 - (b) Nucleus.
 - (c) Mitochondria.
4. Define isoelectric point.
5. Name one oxidation product of glucose.
6. Define iodine number.
7. Write down one important reaction used to detect the presence of amino acids.
8. How many asymmetric carbon atoms are present in a molecule of fructose ?
9. Write down the structure of α - D glucopyranose.

(9 \times 1 = 9 weightage)**Turn over**

Section B

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

10. Briefly explain the biochemical evolution of organisms.
11. Discuss the reducing action of sugars.
12. Discuss the acid base properties of amino acids.
13. Explain with structures Sanger's reaction and its importance.
14. What is mutarotation ?
15. Draw the structure of cAMP and explain its important functions.
16. Write down the structure and functions of tripalmitin.
17. What are the functions of nucleotides ?

(7 × 3 = 21 marks)

Section C

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

18. Draw the structure of GTP and note down the different types of bonds.
19. Write down the classification of lipids with examples.
20. What is isomerism ? Discuss the different types of isomerism exhibited by carbohydrates.
21. Describe the different steps in the determination of primary structure of proteins.
22. Write down the structure of cholesterol. What are its functions ?

(4 × 5 = 20 marks)

Section D

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

23. Describe in detail the classification of carbohydrates. Explain with examples and structures. Show the type of glycosidic bond.
24. Describe the Watson and Crick model of DNA.

(1 × 10 = 10 marks)