

D 32335

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Name.....

Reg. No.....

**FIRST SEMESTER (CBCSS—UG) DEGREE EXAMINATION
NOVEMBER 2022**

Bio Chemistry

BCH 1C 01—BIOCHEMISTRY—I

(2020—2022 Admissions)

Time : Two Hours

Maximum : 60 Marks

Section A

*Answer all the questions.
Each question carries 1 mark.*

1. Which of the following is a non-reducing sugar ?
(a) Lactose. (b) Galactose.
(c) Sucrose. (d) Maltose.
2. Which of the following is not an unsaturated fatty acid ?
(a) Arachidonic acid. (b) Oleic acid.
(c) Palmitic acid. (d) Linoleic acid.
3. The organelle that plays a role in cell division is :
(a) Ribosome. (b) Mitochondria.
(c) Centriole. (d) Endoplasmic reticulum.
4. The most abundant RNA in the cell is _____.
5. The test used to distinguish carbohydrates from other biomolecules is _____.
6. The organelle that contains digestive enzymes is _____.
7. The functional group present in arginine is _____.
8. Name the characteristic test used to identify amino acids.
9. Give the C4 epimer of glucose.

(1 × 9 = 9 marks)

Turn over

Section B

*Answer any **seven** questions.*

Each question carries 3 marks.

10. What do you understand by rancidity ? Explain the two types of rancidity ?
11. A fat has low saponification number and high iodine number. What can you understand about the nature of the fat from this data ?
12. Explain the phenomenon of mutarotation.
13. (a) Define Zwitter ion.
(b) Mention the chemistry of Biuret reaction.
14. (a) Write the characteristics of peptide bond.
(b) Write the structure of an aromatic amino acid.
15. (a) Name the purines and pyrimidines.
(b) Draw the structure of ATP.
16. (a) Write the structure of hyaluronic acid.
(b) Write on the reducing action of sugars.
17. (a) Optical isomerism of Carbohydrates.
(b) Structure of Cholesterol

(7 × 3 = 21 marks)

Section C

*Answer any **four** questions.*

Each question carries 5 marks.

18. (a) Give the functions of Golgi bodies and Endoplasmic reticulum.
(b) Draw the structure of a cell.
19. How are polysaccharides classified ? Write briefly on the structure of Starch.

20. (a) List the different types of RNA.
(b) With a neat diagram, explain the structure of tRNA.
21. Write briefly on the precipitation reactions of proteins.
22. Briefly describe the classification of fatty acids.

(4 × 5 = 20 marks)

Section D

*Answer any **one** question.*

The question carries 10 marks.

23. Describe the salient features of the Watson and Crick model of DNA.
24. Discuss the different levels of protein structure.

(1 × 10 = 10 marks)