QP Code: D 122719	Total Pages: 2	Name:
		Register No.

SECOND SEMESTER (CUFYUGP) DEGREE EXAMINATION, APRIL 2025

BIOCHEMISTRY

BCH2MN101: Life molecules

2024 Admission onwards

Maximum Time :2 Hours	Maximum Marks :70

Section A

All Questions can be answered. Each Question carries 3 marks (Ceiling : 24 Marks)

1	What is reducing sugar? Give one example.
2	Compare and contrast the structures of glucose and fructose.
3	Write a short note on 2-deoxy-β-D-ribofuranose.
4	What are glycosidic bonds? Explain with an example.
5	What is a peptide bond? How is it formed?
6	Differentiate between primary and secondary structures of proteins.
7	Differentiate between nucleosides and nucleotides.
8	Compare native PAGE and SDS-PAGE.
9	Differentiate between phospholipids and sphingolipids.
10	What is the physiological significance of cholesterol?

Section B

All Questions can be answered. Each Question carries 6 marks (Ceiling : 36 Marks)	
11	Explain the structure and biological significance of lactose and trehalose.
12	Describe the importance and structural organization of glycogen and starch.
13	Compare the primary, secondary, and tertiary structures of proteins.
14	What is Edman degradation? Explain its role in protein sequencing.
15	Explain the principles and applications of ion exchange chromatography.
16	Compare and contrast spectrophotometry and colorimetry.
17	Explain the classification of fatty acids with examples.
18	Describe the significance of essential fatty acids.

Section C

Answer any ONE. Each Question carries 10 marks (1x10=10 Marks)	
19	Discuss in detail the various types of carbohydrate isomerism with appropriate examples.
20	Explain the Watson and Crick Model of DNA structure, and biochemical significance of nucleotides.