

## B.Sc. Sem.-2 Examination

CC-3 - 103

Biochemistry

June 2022

Time : 2-00 Hours]

[Max. Marks : 50

**Instructions:** All questions in section - I carry equal marks.  
Attempt any **THREE** questions in section - 1  
Questions in section - II is compulsory

Time: 2. 00 hrs.

Total Marks: 50

## Section - I

Q1. (A)	Give structure, sources, and functions of: 1. Glycogen. 2. Chitin. 3. Heparin	(06)
(B)	Discuss: Structure, properties and use of Cellulose	(08)
Q2. (A)	Give structure, sources, and functions of: 1. Pectin. 2. Starch. 3. Chondroitin sulphate -A .4. Inulin	(08)
(B)	Write a note on structure of bacterial cell wall	(06)
Q3. (A)	Write a note on conjugated proteins	(06)
(B)	Discuss the functions of proteins.	(08)
Q4. (A)	Discuss the following: 1. Precipitation of proteins by organic solvent 2. List the steps involved in protein sequencing	(08)
(B)	Describe alpha helical structure of proteins	(06)
Q5. (A)	Discuss the functions of Phospholipids	(09)
(B)	Discuss the action of Phospholipases on Lecithin.	(05)
Q6. (A)	Draw the structure and discuss the properties and functions of Cholesterol	(10)
(B)	Write a brief note on Prostaglandins.	(04)
Q7. (A)	Draw the structures of the nitrogen bases found in RNA. List three important properties of Nitrogen Bases.	(07)
(B)	Draw the structure of any three derivatives of nucleotides and give its function	(07)
Q8. (A)	Write a brief note on: Types of RNA	(07)
(B)	List Watson and Crick postulates of DNA model.	(07)
<b>Section - II</b>		
Q9.	<b>Attempt any Eight Questions</b>	(08)
1.	What is invert sugar? Give an example	
2.	State one difference between starch and Glycogen	
3.	State one function of hyaluronic acid	
4.	Which homopolysaccharide is used as jelling agent?	
5.	What are simple proteins?	
6.	Name the four levels in protein structure	
7.	Give one difference between Globular & Fibrous protein	
8.	Name any two different types of lipoproteins present in blood	
9.	What are Cerebrosides made of?	
10.	State any one physical property of Phospholipids	
11.	Name any two Sphingolipids	
12.	Name any two colour reactions of Cholesterol	
13.	What is the nature of bond between the nitrogen bases	
14.	What is a rare base? Give one example.	
15.	What is the difference between Nucleoside and Nucleotide	
16.	List two important differences between DNA & RNA	