

Reg. No.:



Name:

University of Kerala

U8693

Second Semester FYUGP Degree Examination, April 2025

Discipline Specific Core Course

BIOCHEMISTRY

UK2DSCBCH100 - Introduction to biomolecules

Academic Level: 100-199

Time: 1 Hour 30 Minutes(90 Mins.)

Max. Marks: 42

Part A. 6 Marks.Time:6 Minutes.(Cognitive Level:Remember(RE)/Understand(UN)) Objective Type. 1 Mark Each.Answer all questions

Qn No.	Question	CL	CO
1	Identify the charge on a Zwitter ion.	RE	3
2	What are derived lipids?	RE	2
3	Relate between the isoelectric pH and charge of a particular amino acid.	UN	3
4	Identify the alcohol backbone in phospholipids.	UN	2
5	How do hydrogen bonds contribute to secondary structure formation?	UN	4
6	Which polysaccharide is the storage form of carbohydrates in plants?	UN	1

Part B.8 Marks.Time:24 Minutes.(Cognitive Level:Understand(UN)/Apply(AP))Short Answer. 2 marks each.Answer all questions

Qn No.	Question	CL	CO
7	Explain epimerism with an example.	UN	1
8	Differentiate between a saturated and an unsaturated fatty acid with an example each.	UN	2
9	Explain how the deficiency of glutathione affects cellular function and overall health.	AP	3
10	Cephalin is a compound lipid. Justify.	AP	2

Part C. 28 Marks.Time:60 Minutes (Cognitive Level:Apply(AP)/Analyse(AN)/Evaluate(EV)/Create(CR)) Long Answer.7 marks each.Answer all 4 Questions choosing among options * within each question

Qn No.	Question	CL	CO
11	A) Discuss the role of various bonds contributing to the different levels of structural organization of proteins. OR B) Elucidate and explain the Open and Haworth structure of glucose and fructose.	AP	4, 1
12	A) Analyse the structure and functions of cholesterol. OR B) Analyse the structural difference between starch and glycogen.	AN	2, 1
13	A)	EV	3, 1

Qn No.	Question	CL	CO
	Evaluate the biological significance of any three peptides. OR B) Evaluate disaccharides, trisaccharide and polysaccharides in terms of structure with suitable examples.		
14	A) Create a table indicating the differences between simple and compound lipids with suitable examples. OR B) Provide the differences between epimers, enantiomers and diastereomers with suitable examples.	CR	2, 1