PRN:		Course Code :	CHS 312

Third Year **B.Sc. Chemistry** End Semester Examination Summer 2023

Molecules of Life

Day and Date: Saturday, 17/06/23 Max Marks: **100**

Time : 10:30 – 1:30 pm Duration: **03** hrs

Instructions: All questions are compulsory.

		Marks	Bloom's Level	CLO
Q.1	**Attempt the following**	**25**		
a)	What are the carbohydrates? Give its classification with examples.	08	L1	CLO1
b)	Write the open chain structure of glucose. Discuss any four evidences of glucose structure.	08	L3	CLO1
c)	i) Explain reducing and non-reducing sugars with examples. ii) Discuss classification of amino acids.	05 04	L2	CLO1
	or			
c)	Draw the Haworth formula for the following i) Sucrose ii) α- D-Glucose iii) α-Maltose iv) Lactose	09	L3	CLO1
Q.2	**Attempt the following**	**25**		
a)	Describe the lock and key mechanism and Michaelis-Menton hypothesis of enzyme action with examples.	08	L2	CLO2
b)	Explain the factors affecting on enzyme activity.	08	L2	CLO2
c)	Define the following terms i) Cofactor ii) Optimal temperature iii) Coenzyme iv) Turnover number	09	L1	CLO2
	or			
c)	What is inhibition of enzymes? Explain the types of inhibition with suitable diagram.	09	L2	CLO2

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Q.3	**Attempt the following**	**25**		
a)	Give the scientific developments leading to the discovery of Watson- Crick model of DNA.	08	L3	CLO3
b)	Name and draw the structures of two purines and two pyrimidines.	08	L3	CLO3
c)	Define nucleic acid. Explain nucleosides and nucleotides with suitable examples.	09	L2	CLO3
	or			
c)	i) Write a note on DNA replication.	06	L2	CLO3
	ii) Draw the structure of RNA.	03	L3	
Q.4	**Attempt the following**	**25**		
a)	Define lipids. Give its Classification.	08	L1	CLO4
b)	What are omega fatty acids? Explain the structures of omega-3 and omega-6 fatty acids.	08	L2	CLO4
c)	Explain the biological role of phospholipids and triglycerides.	09	L2	CLO4
	or			
c)	Define and explain the following terms i) Acid value ii) Saponification value iii) Iodine value iv) R.M. Value	09	L2	CLO4

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