

DCV-003-1131004 Seat No. _____

M. Sc. (Sem. I) (Biotech) (CBCS) Examination

August - 2022

Biochemistry: BT-104

Faculty Code: 003 Subject Code: 1131004

Time : $2\frac{1}{2}$ Hours] [Total Marks: 70

Instruction: Attempt any five questions.

- 1 Answer the following: (Each of **02** marks)
 - Define epimer with example.
 - What is iodine number? (2)
 - (3) What is saponification number ?
 - Classify carbohydrates on the basis of hydrolysis. **(4)**
 - Write down physiological importance of carbohydrates. (5)
 - Give role of internal membranae to protect introgenise against (6) oxygen inactivation.
 - What is super coiling? **(7)**
- 2 Answer the following: (Each of **02** marks)
- **14**

14

- Classify protein based on their solubility and composition.
- **(2)** What is enantiomers?
- Classify amino acid on the basis of its side chain. (3)
- **(4)** Explain Chargaff's rule
- (5) What is pronas?
- (6) What is role of arginosuccinate synthetase in urea cycle.
- How does symbiosis help the plant host and the rhizobia.
- 3 Answer the following: (Each of 07 marks)

14

- Give an account on classification of lipid with suitable example.
- What are monosaccharide? Write on their classification and (b) properties.

4	Answer the following: (Each of 07 marks)		14
	(a) Describe fatty acid oxidation.		
	(b)	Define disaccharides and provide biological importance of useful disaccherised.	
5	Answer the following: (Each of 07 marks)		14
	(a)	Give an account of classification of amino acid.	
	(b)	Discuss various levels of protein organization.	
6	Answer the following: (Each of 07 marks)		14
	(a)	Explain the experiments which concluded that DNA was a genetic material.	
	(b)	Explain Classification of the protein on the basis of the function.	
7	Answer the following: (Each of 07 marks)		14
	(a)	Outline salient features of the mRNA of prokaryotes and eukaryotes.	
	(b)	Describe "Ramachandran plot".	
8	Answer the following: (Each of 07 marks)		14
	(a)	Describe the mechanism of N2 reduction by nitrogenase.	
	(b)	Explain the light reaction in photosynthesis.	
9	Answer the following: (Each of 07 marks)		14
	(a)	Describe the mechanism of respiratory protection of nitrogenase against oxygen inactivation.	
	(b)	What is Hatch -Slack Pathway? Give the difference between C4 and CAM pathways.	
10	Answer the following: (Each of 07 marks)		14
	(a)	Explain urea cycle.	
	(b)	Write a short note of TCA cycle.	