

B.Sc. Sem.-1 Examination

CC-3-P-101

Biochemistry

October-2024

Time : 2-30 Hours]

[Max. Marks : 70

- Q1. a Write a short note on Central Dogma of Life. (06)
 b Discuss the scope of Biochemistry (08)
- OR
- Q1 a Write a short note on Mutation (07)
 b Write a short note on Origin of life. (07)
- Q2 a Write structures of:
 D- Glucose, D-Fructose, D-Galactose, D-Ribose, D Mannose (10)
 b Discuss Molisch test for Sugars (04)
- OR
- Q2 a Discuss the following:
 1. Fehling's reaction & its importance (03)
 2. Barfoed's reaction and its significance (03)
 3. Discuss Lobry de Bruyn –Von Ekenstein reaction of Sugars (04)
 b Discuss the classification of Carbohydrates with examples. (04)
- Q3. a Write the structure of: Alanine, Tyrosine, Glutamic acid, Proline, Lysine, Cystein (06)
 b Discuss the following: (08)
 1. Amino acids as Ampholytes
 2. Decarboxylation reaction of amino acid
- OR
- Q3. a Discuss the titration curve in detail of Alanine with proper graph (14)
 Q4. a Discuss the functions of Fatty Acids. (08)
 b Define PUFA, MUFA with an example for each with the structures. (06)
- OR
- Q4. a Discuss the following reactions of fatty acids: (06)
 1. Salt formation,
 2. Hydrogenation
 b Discuss any four chemical constants of Fats (08)
- Q5. Answer to the point: (Any 7) (14)
 1. Name any one biochemist & his contribution.
 2. List one difference between enzyme & hormone.
 3. What is the energy currency of cell & give its full form.
 4. Define Epimer with an example
 5. Define Anomer with an example
 6. Define with example: Rare amino acids.
 7. Define Lipids with an example

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- 8 What are Waxes? Give one use of Waxes.
 - 9 How will you confirm the presence of ketosugars in a carbohydrate sample?
Give an Example of a keto sugar.
 - 10 Define Catabolism & Anabolism .
 - 11 What types of amino acids are hydroxyl proline & Ornithine?
 - 12 Define Isoelectric pH & what is its importance?
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