

## B.Sc. Sem.-1 Examination

CC 3 P 101

Bio-chemistry

December-2025

Time : 2-30 Hours]

[Max. Marks : 70

- Q1a) Discuss the scope & application of Biochemistry (14)  
OR
- Q1 a) Write a note on origin of life. (14)
- Q2 a) Write the structures of: D- Glucose, D- Fructose (04)  
b) Define Epimers & Anomers with examples. (04)  
c) Discuss iodine test for carbohydrates (04)  
d) Explain  $[\alpha]_D^{25}$  (02)  
OR
- Q2 a) What is the difference between 1. D & d sugars 2. L & l sugars? Give an example of each. (08)  
b) What is the functions of Carbohydrates in our body (06)  
OR
- Q3 a). Write the structure of: Glycine, Alanine, Valine, Aspartic acid, Lysin, Serine, Cysteine (07)  
b). Discuss amphoteric nature of Amino acids. (07)  
OR
- Q3 a) Write a note on any two: (12)  
1. Rare Amino acids  
2. Nonprotein Amino Acids  
3. Decarboxylation reaction of Amino acids  
b) Name the amino acids which give colour reaction positive: Sakaguchi reaction & Millons test. (02)
- Q4 Write a note on Rancidity of fats (14)  
OR
- Q4 a) Discuss : Hydrogenation reaction & halogenations reaction of fatty acids (06)  
b) Discuss any four chemical constants of fat. (08)

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(14)

Q5 Answer briefly: (Any 7)

- 1 Diagrammatically show central dogma of life.
- 2 Define Mutation
- 3 Write the full form of DNA & RNA.
- 4 Give the name of Sanger's reagent.
- 5 Which sugars give Seliwanoff test positive?
- 6 Draw osazones of Glucose & Lactose.
- 7 Define essential amino acids. Give one example of it.
- 8 Draw & label titration curve of Alanine
- 9 Draw the structure of Triglyceride.
- 10 Write full form of PUFA & MUFA.
- 11 Write the reaction of fatty acids with KOH.
- 12 Define nonreducing sugar with an example.
- 13 Give two example of Hydroxyl group containing amino acid.
- 14 Write the structure of Palmitic acid.

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