

B.Sc. Semester - 3 (CBCS) Examination
Oct/Nov - 2024 (As Per Syllabus Year June-2017)
BIO-CHEMISTRY(CORE)

Time: 2:30 Hours**Marks: 70****Instructions:**

1. All questions are compulsory.
2. Figures to the right indicate marks.

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- Que.1(A) Answer the following. (Any one out of Two) (07)
1. Explain structural classification of Carbohydrates with example in detail.
 2. Write in detail about Glycoprotein.
- Que.1(B) Attempt any one. (Out of Two) (04)
1. Write in detail about Chitin.
 2. Describe stereoisomerisms and optical isomerism of Sugars.
- Que.1(C) Attempt any three. (Out of Five) (03)
1. Give an example of Monosaccharides.
 2. Define component of Bacterial Cell Wall.
 3. Define Mutarotation?
 4. Define Starch.
 5. Give an example of Polysaccharide.
- Que.2(A) Answer the following. (Any one out of Two) (07)
1. Describe physical and chemical properties of Triacylglycerol.
 2. Explain in detail about Biological Significance of Fats.
- Que.2(B) Attempt any one. (Any one out of Two) (04)
1. Explain in detail about Saponification Value.
 2. Write in detail about Glycerophospholipids with examples.
- Que.2(C) Attempt any three. (Out of Five) (03)
1. What is Unsaturated Fatty Acids.
 2. Define Steroids.
 3. What is Saponification?
 4. Define Cholesterols.
 5. Give an example of Lecithin.
- Que.3(A) Answer the following. (Any one out of Two) (07)
1. Explain in detail about classification of Standard Amino Acids.
 2. Draw a structure of Peptide Bond and explain its structure in detail.
- Que.3(B) Attempt any one. (Any one out of Two) (04)
1. Describe classification of Protein in detail.
 2. Explain in detail about structure and biological function of Fibrous Protein.
- Que.3(C) Attempt any three. (Out of Five) (03)
1. What is the common structural feature of all Amino Acids?
 2. What is Lipoprotein?
 3. What is function of Hemoglobin?
 4. What is the primary stabilizing force for the tertiary structure of Proteins?
 5. Define Metalloproteins.
- Que.4(A) Answer the following. (Any one out of Two) (07)
1. Discuss the features of the DNA double helix and their significance.
 2. Describe structure of different types of RNA and explain its role in detail.

- Que.4(B) Attempt any one. (Any one out of Two) (04)
1. Explain Structure of DNA in detail.
 2. Write a note on different structure of RNA.
- Que.4(C) Attempt any three (Out of Five) (03)
1. What is Phosphodiester Bind.
 2. Give an example of Purine Basis.
 3. Draw structure of Nucleoside.
 4. Name a enzyme use for Replication.
 5. Which type of RNA is responsible for carrying genetic information from the DNA to the ribosome.
- Que.5(A) Answer the following. (Any one out of Two) (07)
1. Explain in detail about Vitamin Deficiency.
 2. Write a note on biological significance of Vitamins.
- Que.5(B) Attempt any one. (Any one out of Two) (04)
1. Describe the classification of Porphyrins.
 2. Explain importance of Metalloporphyrin.
- Que.5(C) Attempt any three (Out of Five) (03)
1. What is the central dogma of Molecular Biology?
 2. Name of Vitamin B6.
 3. What is Porphyrins?
 4. Give a name of diseases due to Vitamin Deficiency.
 5. What is Bile Pigment.
