

M.Sc.(Chem.) Semester - 4 (CBCS) Examination
April/May-2023 (NEW COURSE)
Chemistry of Biomolecules(Elective-1)

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

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

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- Q.1(A) Answer the following questions. (04)**
Explain classification of Proteins based on Physical properties.
- Q.1(B) Answer the following question. (Any Two) (10)**
 1. Draw the structure of aromatic and acidic amino acids.
 2. Describe four levels of protein structures.
 3. Describe proteoglycans.
- Q.2(A) Answer the following questions. (04)**
Write a note on various classes of enzymes.
- Q.2(B) Answer the following question. (Any Two) (10)**
 1. Discuss about structure and biological functions of pyridoxal phosphate.
 2. Depict the structure and discuss the biological functions of FAD.
 3. Diagrammatically describe types of enzyme inhibitors.
- Q.3(A) Answer the following questions. (04)**
How Renaturation of DNA is dependent on supercoiling and linking no. of DNA?
- Q.3(B) Answer the following question. (Any Two) (10)**
 1. Describe the types of RNA and Draw the structure of RNA nucleotides.
 2. Describe hyperchromicity and hypochromicity of DNA.
 3. Describe the Watson and Crick model of DNA.
- Q.4(A) Answer the following questions. (04)**
Discuss functions of prostaglandins.
- Q.4(B) Answer the following question. (Any Two) (10)**
 1. Differentiate between saturated and unsaturated fats with the help of diagrams.
 2. Enlist the functions of lipids.
 3. Describe the functions of cholesterol.
- Q.5(A) Answer the following questions. (04)**
Explain any one non reducing sugar with structure; also explain why it is non reducing?
- Q.5(B) Answer the following question. (Any Two) (10)**
 1. **A.** How linear structure of glucose converts to cyclic structure?
B. Explain any two structure of disaccharide
 2. Explain reactions of carbohydrates due to the presence of aldehyde group.
 3. Describe stereo isomerism of sugars.
