

M.Sc. (Botany) Semester - 2 (CBCS) Examination
May/June-2022 (NEW COURSE)
Biochemistry (CORE)

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

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

Q.1 Answer the following (any 7) 14

1. Give the difference between homo- & heteropolysaccharides .
2. Write four examples each of monosaccharides along with their chemical formula
3. Explain the term 'non-saponifiable lipids'.
4. Define the term "epimers" and "enantiomers" with respect to carbohydrates
5. What is 'carnetine shuttle' ?
6. Explain the term 'zwiterions'.
7. What are non-essential types of amino acids.
8. What is the difference between first order and second order reaction?
9. State the laws of thermodynamics in brief
10. Which are the enzymes used in the process of 'Glycolysis' pathway

Q.2 Answer the following (any two) 14

1. Explain in detail the Beta oxidation of fatty acids.
2. Write in detail the properties of Reducing and Non-reducing disaccharides sugars with appropriate examples
3. Give the detail account of chemical properties of homolipids and heterolipids

Q.3 Answer the following 14

1. Give the description and importance of Ramchandran plot
2. Explain in detail 'Titration curve'

OR

Q.3 Answer the following

1. Write a note on classification of aminoacids 05
2. Write a note on primary and secondary proteins. 05
3. Describe major important functions of proteins. 04

Q.4 Answer the following (any two) 14

1. Discuss the nomenclature and classification of enzymes.
2. Write the principles of single and multisubstrate coenzyme
3. Describe the mechanism of action of anabolic and catabolic enzymes.

Q.5 Answer the following (any two) 14

1. Write a detailed note on Glycolysis
2. Discuss the pathway of gluconeogenesis in detail
3. Describe the 'Krebs cycle' in detail
4. Write a brief note on allosteric proteins and feedback inhibition.
