

## M.Sc Semester-4 Examination

509

Chemistry (O) (old)

April-2024

Time : 2-30 Hours]

[Max. Marks : 70

Instructions : All questions carry equal marks.

All questions are Compulsory.

**Attempt any seven in Question 5**

**Q-I** A What is the role of water in human body. How pH is maintained in human body 7

B Give classification of Vitamins and discuss in brief the importance of each in human body. 7

**OR**

A Discuss structure and Biochemical function of Vitamin C. 7

B. Discuss absorption, transport and biochemical application of vitamin A. 7

**Q-II** A What are polypeptides? Discuss method for determination of N-terminal amino acids in a peptide chain? 7

B What is enzyme inhibition? Explain various types of enzyme inhibitors with suitable example. 7

**OR**

A Write a short note on structure of proteins... 7

B. Give classification of enzymes and discuss diagram of activation energy. 7

**Q-III** A Discuss various steps in structure elucidation of cellulose. 7

B What are nucleic acids? Draw and explain double helix structure of DNA. 7

**OR**

A Write a short note on carbohydrates. 7

B Give structure, nomenclature of nucleosides and nucleotides 7

**Q-IV** A Give an account of structure, function and nomenclature of lipids? 7

B Discuss structure and properties of fatty acids? 7

N 87-2

OR

A Write a note on phospho and sphingo lipids.

7

B. Write a short note on Biosynthesis of Fatty acids.

7

**Q-V** MCQs (Attempt any seven. Each answer carry 2 marks )

14

- 1 What are amino acids ?
- 2 Define mutarotation in carbohydrates.
- 3 Write structure of two fatty acids?
- 4 What are anomers? Give example.
- 5 What is iodine number in fats?
- 6 Give two differences between RNA and DNA ?
- 7 Name and draw structure of two S containing amino acids.
- 8 Name two vitamins which also act as antioxidants?
- 9 Draw ring structure of glucose.
10. What is Sanger reagent?
11. Name two Bio polymers.
12. Write structure of vitamin B6.

—X—