

MASTER OF SCIENCE (MICROBIOLOGY) (CBCS - 2018 COURSE)
M.Sc. (Microbiology) Sem-I : WINTER- 2022
SUBJECT : BIOCHEMISTRY

Day : Wednesday

Time : 02:00 PM-05:00 PM

Date : 4/1/2023

W-18583-2022

Max. Marks : 60

N.B.

- 1) All questions are **COMPULSORY**.
 - 2) Figures to the right indicate **FULL** marks.
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Q.1 Write the classification of lipids with examples. Describe structure and functions of sphingolipids. **(15)**

OR

What are Polysaccharides? Describe the structure and functions of starch and glycogen.

Q.2 a) Write in detail the Watson and Cricks model of DNA. Add a note on Z form. **(08)**

b) Explain in brief secondary structures found in proteins. **(07)**

Q.3 Attempt **ANY THREE** of the following: **(15)**

- 02** a) What is T_m value? How is T_m of a DNA determined?
- b) Define the term co-transport. Explain with suitable example : i) Symport ii) Uniport iii) Antiport.
- c) Explain the structure of peptide bond. Add a note on α-helix polypeptide.
- d) Write a note on ATP driven solute transport.
- e) Explain structure of reducing sugars with example.

Q.4 Attempt **ANY THREE** of the following: **(15)**

- a) Write a note on non gated ion channels.
- b) Write in brief any one immunological technique used in study of proteins.
- c) Write common ring structures found in biomolecules.
- d) Write the structure and function of mRNA and rRNA.
- e) Write a note on : Applications of biochemistry.

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