MASTER OF SCIENCE (BIOINFORMATICS) (CBCS-2019 COURSE)
M. Sc. (Bioinformatics) Sem-I : WINTER :- 2021
SUBJECT: BIOCHEMISTRY

Day : Thursday
Date 27-01-2022

W-21148-2021

Time : 10:00 AM-11:30 AM
Max. Marks: 30

N. B. :

1) All questions are **COMPULSORY**.
2) Figures to the right indicate **FULL** marks.
3) Answers to both the sections should be written in **SAME** answer books.

SECTION – I

Q. 1 Answer **ANY FIVE** of the following: **(05)**

a) The monomer of chitin is ----------

b) Define racemic mixture.

c) Write two significance of triacylglycerol in certain animals.

d) Draw the structure of two epimers of glucose.

e) What are sugar acids? Give an example.

f) Name and draw the structure of major component of beeswax.

g) What is the importance of NANA? Draw the structure.

Q. 2 Attempt **ANY TWO** of the following: **(10)**

a) Describe the structure of peptidoglycans and give its importance.

b) Write a short note on lactose intolerance.

c) Explain the structure and biological significance of cholesterol.

SECTION – II

Q. 3 Answer **ANY FIVE** of the following: **(05)**

a) The cofactor for enzyme Hexokinase is ---------

b) Define conjugated proteins. Give 2 examples.

c) Write 2 characteristics of α-Helical structure of protein.

d) Define Bohr effect.

e) Name any 2 amino acids with aromatic R-groups.

f) What do you mean by turnover number?

g) Depict a peptide bond formation between two amino acids.

Q. 4 Attempt **ANY TWO** of the following: **(10)**

a) Describe in brief the Ramachandran plot.

b) What do you mean by amphoteric nature of amino acids? Explain with example.

c) Write a short note on transport of H^+ and CO_2 by Hemoglobin.

* * * * *