B.Sc. Semester-II Examination, 2022-23

PHYSIOLOGY [Honours]

Course ID : 22512 Course Code : SH/PHY/202/C-4(T)

Course Title : Chemistry of Biomolecules

[NEW SYLLABUS]

Time : 1 Hour 15 Minutes Full Marks : 25

The figures in the right-hand margin indicate marks.

Candidates are required to give their answers in their own words as far as practicable.

UNIT–I

1. Answer any **five** questions of the following: 1×5=5

a) Differentiate between aldo and keto sugars.

b) Write the definition of codon.

c) What is Zwitterion?

d) What is glycogenin?

e) What type of bonding helps in stabilizing the α-helix structure of proteins?

f) Define saponification value of fat.

g) What is isoelectric pH?

h) Define apolipoprotein.

UNIT–II

2. Answer any **two** questions of the following: 5×2=10

a) Mention the features of the Watson and Crick model of DNA structure. State the Clover leaf structure of t-RNA. 2+3

b) Describe the secondary structure of protein. 5

c) Why amino acids do not move in electric field at their isoelectric pH? Add a note on denaturation of proteins. 2+3

d) Define mucopolysaccharide. Classify mucopolysaccharides with suitable example. Differentiate between 'Starch and Glycogen'. 1+2+2

UNIT–III

3. Answer any **one** question of the following: 10×1=10

a) Write the classification of carbohydrate with suitable example. Differentiate between nucleotide and nucleoside. (5+2)+3

b) Classify lipoproteins with example and mention their function. Write short notes on:

i) Lecithin

ii) PUFA (3+3)+(2+2)

———————