Total No. of Questions : 6]

SEAT No. :

P1424

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[5124]-11
M.Sc.
BIOCHEMISTRY
BCH - 170 : Biomolecules
(2008 - 2010 Pattern) (Semester - I)

Time : 3 Hours] *[Max. Marks : 80*

Instructions to the candidates:

1) ***Answers to both sections should be written on seperate answer sheets.***
2) ***All questions are compulsory.***
3) ***Figures to right indicate full marks.***

SECTION - I

Q1) Explain the following (any 5): **[15]**

a) Weak bases with examples.

b) Sugar acids with example and features.

c) Miscelle formation & characteristics.

d) Anomers, epimers, coenzymes.

e) Acid number and its relation with rancidity.

f) Distinguish between water and fat soluble vitamins.

Q2) Answer any three of following: **[15]**

a) Write note on lipoproteins.

b) Give biological significance of carbohydrates.

c) Compare LDL, VDL, HDL.

d) Formation of Macromolecules from their Monomeric subunits.

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Q3) Write notes on any two of following: **[10]**

a) Ionization of water.

b) Fat soluble vitamins.

c) Reactions of glucose with oxidising & reducing agents and their significance.

SECTION - II

Q4) Explain the following (any 5): **[15]**

a) Isoelectric point and its significance.

b) Rare amino acids with example.

c) Significance of disulphide bonds and ionic interaction in maintaining three dimensional structure of protein.

d) Denaturation and its significance.

e) Draw structure of Aspargine, Glutamate, Arginine.

Q5) Answer any three of following: **[15]**

a) Explain force stabilizing tertiary structure of proteins.

b) Write note on Ramchandran plot.

c) Amino acids act as acids and bases. Explain.

d) Explain α-helical structure of proteins.

Q6) Write note on any two: **[10]**

a) Glycine titration curve.

b) Quaternary structure of protein.

c) Steps involved in determination of primary structure of proteins.