

B.Sc Sem-2
P = 05
Code = Bt202

Full marks = 50

Group -- A

(Short-answer Type Questions)

(Compulsory)

1. Match the following :

1×5 = 5

(i) Enzymes

(a) Deoxyribose sugar

(ii) Amino acid

(b) Mitochondria

(iii) DNA

(c) Left handed

(iv) Electron transport chain

(d) Induced fit model

(v) Z-DNA

(e) Aspartic acid

2. Fill in the blanks :

1×5 = 5

(a) The functionally active form Vitamin D is _____.
(Calcitriol / Cholecalciferol)

(b) The number of base pairs present in each turn of B form of DNA helix is _____.

(10 / 12)

(c) The four vitamins, namely vitamin A, D, E & K are known as _____ soluble.

(Fat / Water)

(d) α -helix is the most common spiral structure of _____.
(Lipid / Protein)

(e) Multiple forms of the same enzymes is known as _____.

(Co-enzymes / Isoenzymes)

3. Write short notes on any two of the following :

~~12~~ (5×2 = 10)

(a) Nucleotide

(b) Secondary structure of protein

(c) Polysaccharide

(d) Structure of tRNA

(e) Active site

Group – B

(Descriptive Type Questions)

Answer any **three** questions :

15×2 = **30**

4. What are enzymes ? Describe the mechanism of enzyme action. Write an account of the various factors of affecting enzyme activity.
5. Describe the structure and properties of water. Discuss water as a biological solvent.
6. Describe the structure of Watson and Crick model of B DNA with the help of suitable diagram.
7. Write an account of classification of lipids with suitable diagram.
8. Define and classify carbohydrate with suitable example. Write a note on the functions of carbohydrate.