

(A-11)

SARDAR PATEL UNIVERSITY**M. Sc. Integrated Biotechnology Examination, Third Semester****Wednesday, 22nd April, 2015****2:30 p.m. to 5:30 p.m.****Subject: Biochemistry – I (PS03CIGB02), ATKT****Total Marks: 70**

- Notes: - 1) Figures to the right indicate marks.
2) Draw neat and labeled diagram, wherever necessary.

Q.1 Choose the Correct Answers of the Following.**[08]**

- is a S containing amino acids
a) Valine b) Serine c) Cysteine d) Tyrosine
- Phosphorous is present in.....
a) DNA b) mRNA c) tRNA d) All
- Galactose is also known as
a) Milk Sugar b) Cane Sugar c) Table Sugar d) Fruit Sugar
- Which of these is an animal storage polysaccharide?
a) Starch b) Inulin c) Heparin d) Glycogen
- bond is present in secondary structure of protein
a) α Keratin b) Peptide c) Phosphodiester d) Ester
- Which of them is a basic amino acid?
a) Lysine b) Alanine c) Glutamic acid d) Valine
- Which of them is storage form of lipid in animal?
a) Triglycerides b) Shingosine c) Cerebrosides d) Cholesterol
- Sugar + nitrogen base =
a) DNA b) RNA c) Nucleotides d) Nucleosides

Q.2 Answer the following in short. (Attempt Any Seven)**[14]**

- What are different bond present in proteins?
- Explain properties of lipid.
- What are oligosaccharides?
- Draw the structure for Glucose and lactose.
- What are essential amino acids?

6. Explain the structure for Alanine and Glutamic acid.
7. What are phospholipids? Explain the biological function.
8. Give names of essential fatty acids.
9. Write the full form for DNA, RNA, TAG and mRNA.

Q.3 (A) Explain the distribution of Carbohydrate, Lipid, Protein and Nucleic acid in an organism. [06]

(B) What are ester and phosphodiester bond found in different biomolecules? Explain with an example. [06]

OR

(B) Write the involvement of Glycosidic bond and Peptide bond in the formation of higher Carbohydrate and Peptides. [06]

Q.4 (A) Classify Carbohydrate in detail. [06]

(B) Explain the isomers for Carbohydrate. [06]

OR

(B) Give a detail account on Polysaccharides. [06]

Q.5 (A) How protein gets denatured? Explain 5 fundamental approaches for same. [06]

(B) Classify amino acid in detail. [06]

OR

(B) Classify proteins in detail. [06]

Q.6 (A) Discuss different types of lipid found in biological system. [06]

(B) Explain the Watson and Crick model for DNA. [06]

OR

(B) Describe RNAs and it's biological function. [06]