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SARDAR PATEL UNIVERSITY
B.Sc. - IV Semester Examination-2016

Subject Code: US04CBCH01

Date: 09/04/16

Subject: Biochemistry

Total Marks: 70

Paper Title: Biochemistry of Biomolecules-2

Time: 10.30 a.m. to 01.30 p.m.

Q1. Choose the correct option and write it in the answer sheet:

[10]

- 1) Which of the following is not a protein?
a) Histones b) Haemoglobin c) Haematin d) Actin
- 2) Which of these proteins is present in milk?
a) Collagen b) Elastin c) Casein d) Keratin
- 3) The number of amino acid residues in each turn of α -helix of protein structure is _____:
a) 3.6 b) 3.0 c) 4.2 d) 4.5
- 4) Which of these is not an essential fatty acid?
a) Linolic acid b) Linolenic acid
c) Arachdonic acid d) Capric acid
- 5) Dipalmitoyl lecithin, a surfactant present in lungs is a _____:
a) Lipoprotein b) Phospholipid c) Carbohydrate d) Protein
- 6) When the lipids are exposed to air, water, sunlight and bacteria, deterioration occurs, this process is _____:
a) Scarification b) Rancidity.
c) Coagulation d) Saponification
- 7) Which of these was used by Hershey and Chase to radiolabel the DNA core of bacteriophage?
a) Phosphorus b) Nitrogen c) Carbon d) Sulphur
- 8) D-arm is a characteristic feature of _____:
a) rRNA b) mRNA c) tRNA d) All of these
- 9) An enzyme without its coenzyme is known as _____:
a) Isoenzyme b) Metalloenzyme
c) Holoenzyme d) Apoenzyme
- 10) CPK has _____ isoenzymes:
a) 1 b) 2 c) 3 d) 4

Q2. Answer the following (any ten):

- 1) Briefly discuss formation of peptide bond of proteins.
- 2) Define: (i) Salting out (ii) Precipitation.
- 3) Write a note on denaturation of proteins.
- 4) Define: (i) Rancidity (ii) Halogenation
- 5) Write a short note Antioxidants.
- 6) What is Iodine number? Explain
- 7) What is a Plasmid? Write its characteristics.
- 8) What is Complementary base pairing?
- 9) Write a short note on m-RNA.
- 10) Give definition of Multienzyme and Isoenzyme with suitable examples.
- 11) What is active site of enzymes? Write its salient features.
- 12) What is an exo enzyme?

[20]

Q3. Classification of proteins in detail with examples of each class.

[10]

OR

Q3. (a) Functions of Proteins.

(b) Discuss structure of Haemoglobin.

[06]

[04]

Q4. (a) Write short notes on: (i) Autooxidation (ii) Lipoproteins

(b) Cholesterol.

[06]

[04]

OR

Q4. (a) Discuss Amphipathic lipids and write their significance.

(b) Phospholipids

[06]

[04]

Q5. (a) Discuss Avery, MacLeod and McCarty transformation experiment.

(b) Write a note on RNA.

[05]

[05]

OR

Q5. (a) Discuss Hershey and Chase experiment to confirm DNA as genetic material.

(b) Tertiary structure of DNA.

[05]

[05]

Q6. (a) Discuss classification of enzymes with suitable examples.

(b) Discuss the effect of substrate concentration on enzyme activity.

[05]

[05]

OR

Q6. (a) What are coenzymes? Give classification of coenzymes.

(b) Factors affecting enzyme action.

[05]

[05]
