

SC

[A-93]

No. of Printed Pages: 02

SARDAR PATEL UNIVERSITY
M. Sc. Integrated Biotechnology Examination, Fourth Semester
Thursday, 23rd April, 2015
2:30 p.m. to 5:30 p.m.
Subject: Biochemistry – II (PS04CIGB02)

Total Marks: 70

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

Q.1 Mark the right answer of following questions.

[08]

1. Which of them is a uphill reaction.....
 - a. Glycolysis
 - b. TCA
 - c. Photosynthesis
 - d. Glycogenolysis
2. Dehydrogenases are.....
 - a. Hydrolases
 - b. Oxidoreductases
 - c. Lyases
 - d. Transferases
3. Osteomalacia in adults is caused due to deficiency of
 - a. Vitamin A
 - b. Vitamin E
 - c. Vitamin D
 - d. Vitamin C
4. Fatty acid degradation is also known as.....
 - a. n Degradation
 - b. m Degradation
 - c. β Degradation
 - d. p Degradation
5. Which of the following is a common nitrogen acceptor for all reactions involving transaminases?
 - a. α -keto glutarate
 - b. Oxaloacetate
 - c. Pyruvate
 - d. Acetoacetate
6. Which of them is Alanine transferases.....
 - a. SGOT
 - b. SGAT
 - c. SGPT
 - d. None of them
7. Lactose intolerance is caused due to deficiency of
 - a. Lactase
 - b. Amylase
 - c. Lactamase
 - d. Laccase
8. Which of them inborn disorder of metabolism
 - a. Gout
 - b. Glycogen Storage Disorders
 - c. ADA
 - d. All of them

Q.2 Answer the following in short. (Attempt Any Seven)

[14]

1. Draw the structure of ATP.
2. Explain ΔG for a reaction.

3. What are energy coupling reactions?
4. Differentiate: Fat soluble and water soluble vitamins
5. What is lipolysis? Show its reaction
6. Explain the involvement of Pyridoxal PO⁴ in transamination reaction.
7. What is oxidative deamination?
8. What is ADA?
9. Describe phenylketonuria.

Q.3 (A) What is an enzyme? Write a note on classification of enzymes [06]

(B) Discuss the role of ATP in metabolism. [06]

OR

(B) What are cofactor, holoenzyme and coenzyme? [06]

Q.4 (A) Explain the structure and biochemical functions of Vitamin C and A. [06]

(B) Explain the reactions of B-oxidation of fatty acid. [06]

OR

(B) Write a short note of Vitamin B12/folic acid. [06]

Q.5 (A) Briefly discuss the sources of amino acids in human body. What is positive and negative protein balance? [06]

(B) Explain the metabolism of acidic amino acids. [06]

OR

(B) Give a note on amino acid responsible for the biosynthesis of Adrenaline and Nor Adrenaline. [06]

Q.6 (A) What is glycogen? Write an explanatory note on glycogen storage diseases. [06]

(B) Explain Lactose intolerance and Maple syrup diseases. [06]

OR

(B) Explain GOUT and ADA. [06]
