[18 f A-6] Seat no —

No. of Printed Pages: 02

Sardar Patel University

M. Sc. Integrated Biotechnology Examination, Four Semester
Thursday, 20th October, 2016
10:00 a.m. to 01:00 p.m.
PS04CIGB02: Biochemistry – II

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|

1. Overall chemical reaction that takes place with in a cell are collectively called as_____.
   (a) anabolism (b) catabolism (c) metabolism (d) complex reaction
2. Which of the following is a chemical link between catabolism and anabolism?
   (a) AMP (b) ATP (c) ADP (d) All of these
3. Vitamin D deficiency in adult's causes_____.
   (a) Scurvy (b) Xerophthamia (c) Osteomalacia (d) Pellagra
4. β–oxidation of fatty acids is promoted by which of the following?
   (a) ATP (b) Acetyl co A (c) Propionyl co A (d) NAD +
5. Which of the following is a common compound shared by the TCA cycle and the Urea cycle?
   (a) Fumarate (b) Succinyl co A (c) α-Keto glutarate (d) Oxalo acetate
6. Transaminase enzymes are present in_____.
   (a) pancreas (b) liver (c) intestine (d) stomach
7. Inborn errors of metabolism are referred to as_____ metabolic diseases.
   (a) congenital (b) inherited (c) both a & b (d) none of these
8. Gaucher disease caused by a hereditary deficiency of the enzyme _____.
   (a) aminotranfarease (b) carboxydase (c) flagellase (d) glucocerebrosidase

Q.2 Answer the following in short. (Attempt Any Seven) |14|

1. Define: Enzyme and Co-Enzyme with an example.
2. Narrate about active site of enzymes. How this is different than allosteric site?
3. Narrate biological significance of Vitamin D.
4. What is hypervitaminosis?
5. Define: Essential Amino acids and Non Essential Amino acids
6. What is Protein turn over?
7. Give importance of TAGs.
8. Which drug is used to treat Gout?
9. Narrate the Signs and symptoms of Phenylketonuria.

Q.3 (A)	What is ATP? Explain "Involvement of ATP in metabolism".	[06]
(B)	What is the Holoenzyme? Write down the classification of 'lyases' enzyme with examples.	[06]
	OR	
(B)	Explain the role of hexokinase and PFK1 in energy coupling reactions.	[06]
Q.4 (A)	Enlist the important of fatty acids and describe fatty acids synthesis.	[06]
(B)	Give Detailed account on structure, biochemical functions and deficiency disorder caused by Vitamin A.	[06]
	OR	
(B)	Write down the deficiency disorder caused by vitamin B_1, B_{12} and C.	[06]
Q.5 (A)	Briefly discuss Urea cycle.	[06]
(B)	Explain the involvement of deamination reactions in amino acid metabolism.	[06]
	OR	
(B)	Explain the metabolism of aromatic amino acid tyrosine.	[06]
Q.6 (A)	Write an Explanatory note on Galactosemia and Glycogen storage disease.	[06]
(B)	Short note on : (a) Alkaptonuria (b) Maple syrup urine disease	[06]
	OR	
(B)	Write a note on intermediary metabolism.	[06]

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