

SEAT No. _____

No. of Printed Pages : 2

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SARDAR PATEL UNIVERSITY
B.SC. 5th Semester Examination 2020
Subject: Biochemistry
Subject Code: US05CBCH03
(Metabolism I)

Date: 28/12/2020 Monday
Time: 2:00 PM. To 6:00 PM.

Total Marks: 70

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

[10]

1. Digestive enzymes Pepsin require for break down of food protein.
a) Physical b) Chemical c) a& b both d) None
2. Catabolism is chemical reaction that require for.....
a) Synthesis b) Breakdown c) Transport d) None
- 3) The First phase of glycolysis known as..... phase.
a) Pay off b) Investment c) Transitions d) None
4. Enzymes of Glycolysis are located in.....
a) Mitochondria b) Cytoplasm. c) Golgi d) Ribosome
5. Pentoses produce in HMP are utilized for the synthesis of.....
a) DNA b) RNA c) FAD d) All of these
6. Most fatty acids are degraded by removal of two.....
a) Hydrogen b) Carbon c) Nitrogen d) Oxygen
7. Milk is dietary sources of.....
a) Sucrose b) Mannose c) Glucose d) Lactose
8. Impaired glucose metabolism increase..... in circulation.
a) Glucose b) Galactose c) Fructose d) None
9. Niemann-Pick disease involves dysfunctional metabolism of.....
a) Lipoprotein b) Sphingolipid c) Glycogen d) None
10. Over accumulation of phytanic acid can cause disease.
a) Refsum b) Pentosuria c) Goucher's d) None

[1]

P.T.O

Q2. (A) Write true or false

[04]

- I. Fructose is non reducing sugar.
- II. Fat cannot give energy
- III. Cellulose is plant storage polysaccharide.
- IV. Triglyceride is storage form of lipid.

Q2. (B) Fill in the blanks

[04]

- I. Normal serum Cholesterol level ranges from _____ to _____ mg%
- II. Lipid is usually soluble in _____
- III. Glycogen can be store in _____ and muscle.
- IV. Fatty acids and Glycerol are components of _____

Q3. Answer the followings in short (any ten)

[20]

1. Write first step of citric acid cycle.
2. What are metabolites give examples?
3. Draw the structure of Fructose 6 Phosphate.
4. What is substrate phosphorylation?
5. What are compound lipids?
6. Explain glycogen is highly branched.
7. Define and give two examples of essential fatty acids.
8. Define even chain fatty acid with examples.
9. What are ketonemia, ketonuria and ketosis?
10. Write functions and sources of Cholesterol
11. What is glucagon? How it regulate metabolism?
12. What is chemical nature Insulin, from where it secrete?

Q4. Write answers in details (Any Four)

[32]

1. Write in detail about HMP pathway
2. Write in detail about Glycolysis.
3. Write about Synthesis of Acetone bodies.
4. Discuss about β -oxidation of saturated Fatty acids.
5. Describe in detail about any three glycogen storage disease.
6. Write notes on galactosemia and Pentosurea.
7. Write about Lipid storage diseases.
8. Write about Refsum disease.

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[2]