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SEAT No._____ No. of Printed Pages : 2

[75]

SARDAR PATEL UNIVERSITY
B.Sc. –Vth Semester Examination 2018
Wednesday, 11th April
2.00 P.m. to 5.00 P.m.
Subject Code: US05CBCH03
(Metabolism I) Total Marks: 70

Q1. Choose the correct option and write it in the answer sheet: [10]

1) The Citric acid cycle requires .....Enzymes.
a) Four b) Six c) Two d) Eight

2) Glycolysis is process used by cells requires ..... Enzymes.
a) Seven b) Six c) Ten d) Four

3)The Acetyl –CoA molecule is input molecule for TCA, but .....is also required.
a) Fumrate b)Oxaloacetae c) Malate d) Citrate.

4) ..... is the lowest density lipoprotein.
a) LDL b) HDL c) Chylomicrone d) cholesterol.

5) .....molecule actually transports cholesterol back to the liver.
a) LDL b) VLDL c) IDL d) HDL

6) .....is a hydrolytic enzyme that works in the digestion of Lipid.
a) Hexokinase b) protease c) LDH d) Lipase

7) .....is the main storage polysaccharide of animal cells.
a) Heparin b) Starch c) Glycogen d) Galactans

8) The enzyme defect in vonGierke's disease is.....
a)Glucose 6 Phosphatase b) Isomerase
c) Hexokinase d) Debranching enzyme

9) Hexosamidinase of ganglioside is defective enzyme in ...disease.
a)Forbe's b) Andersen's c) Tay-Sach's d) none of these.

10) Sphingomyelin is accumulated in ..... disease.
a)Niemann pik's b) Tay-sach's c) Krabbe's d) Farber's

Q2. Answer the followings in short (any ten) [20]

1. Write brief comments, "Glycolysis, which literally means splitting of sugar".
2. Write all names of enzymes require for Glycolysis.
3. Write names of enzymes involved in TCA cycle.
4. Give Diagrammatic representation of fatty acids .activation and transport across the mitochondrial membrane.
5. What are various Hormones which regulate fat metabolism?
6. Mention the functions of Triacyl glycerol.
7. Why VonGierke's disease is marked with fasting hypoglycaemia?
8. What is Hepatomegaly?
9. How sphingomyelin is converted in to ceremide?
10. Define lipid and lipid storage diseases.
11. How are lipid storage disease inherited?
12. Define sphigolipidoses?

[P.T.O.]

Q3. A) Draw a well labelled diagram of Citric acid cycle. [05]
B) Write notes on Cori cycle. [05]

OR

Q3. A) How are the glycolysis and TCA cycle linked together? [03]
B) Write detail notes on Payoff –Phase in glycolysis. [07]

Q4. A) With the help of a well labelled diagram,explain β oxidation of fatty acid [07]
B) How are ketone bodies utilized? [03]

OR

Q4. A) Write notes on formation of Acetone bodies. [05]
B) Discuss in detail role of Liver in Lipid metabolism. [05]

Q5. A) Discuss in detail about biochemical manifestation of the VonGierke's disease [05]
B) What are various clinical signs of Pomp's disease? [05]

OR

Q5. A) Describe in detail about Cori's disease. [05]
B) Explain Hepatic glycogenesis is impaired in Her's disease. [05]

Q6. Discuss in detail about inborn error due to defect in enzyme β glucosidase and Hexoseamidinas. [10]

OR

Q6. Write detail notes on Niemann-Pick disease and Refsum's disease. [10]