

SEAT No. _____

No. of Printed Pages: 02

[51]

SARDAR PATEL UNIVERSITY
B. Sc. (ZOOLOGY) – Sixth Semester Examination
Saturday, 17th July, 2021
10:00 a.m. to 12:00 p.m.
US06CZOO23: Metabolism and Nutrition

Total Marks: (70)
(10)

Q-1. MULTIPLE CHOICE QUESTIONS:

- One molecule of Glucose can produce about _____ ATP
(a) 18 (b) 28 (c) 38 (d) 32
- Formation of glucose from non-carbohydrate sources is called-
(a) Glycogenesis (b) Gluconeogenesis (c) TCA cycle (d) Glycolysis
- If oxygen is scarce (anaerobic conditions) the pyruvic acid is reduced to form:
(a) Acetyl co A (b) Lactic acid (c) Citric acid (d) Oxaloacetic acid
- During exercise, skeletal muscle breaks down stored glycogen and produce some ATP by
(a) Aerobically (b) Anaerobically (c) Technically (d) Non technically
- Most of the energy during aerobic respiration is produced by the
(a) electron transport chain (b) glycolysis
(c) Krebs' cycle (d) oxidative phosphorylation
- Cytochromes are found in
(a) matrix of mitochondria (b) cristae of mitochondria
(c) lysosomes (d) outer wall of mitochondria
- The chief protein of cow's milk is
(a) Albumin (b) Vitellin (c) Livetin (d) Casein
- HDL is synthesized and secreted from
(a) pancreas (b) liver (c) kidney (d) muscle
- Each gram of protein or carbohydrate in food provides about _____ calories
(a) 4 (b) 9 (c) 12 (d) 15
- _____ vitamins are termed as antioxidant vitamins.
(a) Vitamins A (b) Vitamins B (c) Vitamins C (d) Vitamins K



(1)

(P.T.O.)

Q-2. TRUE FALSE

(8)

1. Glucose + Fructose = Lactose
2. Liver cells and adipose cells can synthesize lipids from amino acids
3. High-Density Lipoproteins are good cholesterol
4. Guanine is pyrimidine.

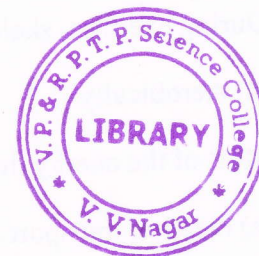
Fill in the Blanks

5. Lowering of core body temperature below 35°C is called _____.
6. Molecules that have both polar and nonpolar parts are said to be _____.
7. Keratin is an example of _____.
8. How much Calorie realized while dietary mixture uses 1 liter Oxygen? _____.

Q-3. ANSWER IN SHORT. (ANY TEN)

(20)

1. What is metabolism? Distinguish between anabolism and catabolism.
2. Give the name of Monosaccharides.
3. Write about Gluconeogenesis.
4. Where are triglycerides stored in the body?
5. What is Chylomicrons?
6. Write down the composition of VLDLs.
7. Enlist the four possible fates of glucose 6-phosphate.
8. How are Essential and Non-Essential amino acids different?
9. Define the terms: Fasting and Starvation.
10. What is BMR? How it is determine?
11. What is Nutrient?
12. Give the names of fat-soluble vitamins.



Q-4. ANSWER IN DETAILED. (ANY FOUR)

(32)

1. Explain Krebs Cycle.
2. Describe Electron transport chain.
3. Explain catabolism of Lipids.
4. Describe the transport of lipids by lipoproteins.
5. Explain Protein anabolism.
6. Discuss the biosynthesis of purine nucleotide.
7. Write an explanatory note on body temperature homeostasis.
8. Explain the role of Vitamin and Mineral Supplements.
