

**Q1/ Choose the right choice :-**

- 1- Under anaerobic conditions the glycolysis one mole of glucose yields ----- moles of ATP.  
(A) One      (B) Two      (C) Eight      (D) Thirty
- 2- The following is an enzyme required for glycolysis:  
(A) Pyruvate kinase      (B) Pyruvate carboxylase  
(C) Glucose-6-phosphatase      (D) Glycerokinase
- 3- During glycolysis, Fructose 1, 6 diphosphate is decomposed by the enzyme:  
(A) Enolase a      (B) Fructokinase      (C) Aldolase  
(D) Diphosphofructophosphatase
- 4- Which of the following is not an enzyme involved in glycolysis?  
(A) Enolase      (B) Aldolose      (C) Hexokinase      (D) Glucose oxidase
- 5- Dehydrogenation of succinic acid to fumaric acid requires the following hydrogen carrier:  
(A) NAD<sup>+</sup>      (B) NADP<sup>+</sup>      (C) flavoprotein      (D) Glutathione



**Q2/ A- Full the blank**

- 1- The liver functions to maintain normal levels of blood sugar by a combination of \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_.
- 2- Glycogen (animal tissues and in microorganisms) is degraded by \_\_\_\_\_ at a nonreducing end to generate glucose 1P.
- 3- The Intermediates for Biosynthesis are :-\_a -Ketoglutarate is transaminated to make \_\_\_\_\_, Succinyl-CoA can be used to make \_\_\_\_\_.  
Fumarate and oxaloacetate can be used to make \_\_\_\_\_ and also \_\_\_\_\_.
- 4- HDL also contains Apo-A-I, which functions as an activator of \_\_\_\_\_ which transfers acyl chains from phospholipids to cholesterol.
- 5- The number of ATP generated from oxidation NADH produce from fatty acid contains 22 C = \_\_\_\_\_.

**B-Write the chemical reaction for these enzyme:-**

- 1- Dextrinase    2-Phosphohexose isomerase    3-acyl-CoA synthetase
- 4-propionyl-CoA carboxylase    5-enoyl-CoA isomerase

**Q3/ Talk about :-**

- 1- Specificity of enzyme    2- Control of Hormone Secretion
- 3-Different between fat soluble and water soluble vitamins