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I'd 15950

Degree D T

Q1) Write down the 4 steps involve in beta oxidation?

Answer # 1

Beta oxidation takes place in four steps: dehydrogenation, hydration, oxidation and thiolysis. Each step is catalyzed by a distinct enzyme. Briefly, each cycle of this process begins with an acyl-CoA chain and ends with one acetyl-CoA, one FADH₂, one NADH and water, and the acyl-CoA chain becomes two carbons shorter.

Q2) Write down clinical significance of the following enzymes

- a) Alkaline phosphatase
- b) Creatine kinase
- c) gamma-glutamyl transferase

Answer # 2

Part (a)

Clinical Significance. The majority of sustained elevated ALP levels are associated with disorders of the liver or bone, or both. ... Since production is increased in response to cholestasis, serum ALP activity provides a sensitive indicator of obstructive and space-occupying lesions of the liver.

Part (b)

Thus creatine kinase is an important enzyme in such tissues. Clinically, creatine kinase is assayed in blood tests as a marker of damage of CK-rich tissue such as in myocardial infarction (heart attack), rhabdomyolysis (severe muscle breakdown), muscular dystrophy, autoimmune myositis, and acute kidney injury.

part (c)

The gamma-glutamyl transferase (GGT) test may be used to determine the cause of elevated alkaline phosphatase (ALP). Both ALP and GGT are elevated in disease of the bile ducts and in some liver diseases, but only ALP will be elevated in bone Disease.

Q3) How many proteins are involve in electron transport chain and how do electrons move in the electron transport chain?

Answer # 3

four protein

The electron transport chain is a series of four protein complexes that couple redox reactions, creating an electrochemical gradient that leads to the creation of ATP in a complete system named oxidative phosphorylation. It occurs in mitochondria in both cellular respiration and photosynthesis.

Moving Of Electron Transport Chain :

The electron transport chain and ATP synthase are embedded in the inner mitochondrial membrane. ... The electrons flow through the electron transport chain, causing protons to be pumped from the matrix to the intermembrane space. Eventually, the electrons are passed to oxygen, which combines with protons to form water.

Q4) Write down the four steps involved in beta oxidation?

Answer # 4

Beta oxidation takes place in four steps: dehydrogenation, hydration, oxidation and thiolysis. Each step is catalyzed by a distinct enzyme. Briefly, each cycle of this process begins with an acyl-CoA chain and ends with one acetyl-CoA, one FADH₂, one NADH and water, and the acyl-CoA chain becomes two carbons shorter.

Q5) How uric acid formation takes place in body?

Answer # 5

The formation of uric acid is through the enzyme xanthine oxidase, which oxidizes oxypurines. Normally a small amount of uric acid is present in the body, but when there is an excess amount in the blood, called hyperuricemia, this can lead to gout and formation of kidney stones.

Molecular Formula: C₅H₄N₄O₃

Molecular Weight: 168.11 g/mol.

Range in body:

Most of it is excreted (removed from your body) in your urine, or passes through your intestines to regulate "normal" levels. Normal Uric acid levels are 2.4-6.0 mg/dL (female) and 3.4-7.0 mg/dL (male). Normal values will vary from laboratory to laboratory. Also important to blood uric acid levels are purines.