



قائمة الاسئلة

الكيمياء الحيوية الثاني - قسم طب وجراحة الفم والاسنان كلية طب وجراحة الفم والاسنان درجة الامتحان (60)

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1) high energy bonds yield

- 1) >7.3
- 2) <7.3
- 3) 7.3
- 4) <3.7

2) the product of glycolysis in erythrocyte is

- 1) NADPH
- 2) Lactate
- 3) Pyruvate
- 4) carbon dioxide

3) Glucokinase is more active after meal , because :

- 1) it is an inducible enzyme
- 2) has more affinity to glucose than hexose
- 3) present in all tissue
- 4) can act on all monosaccharide

4) which enzyme catalysis an irreversible reaction

- 1) Transketolase
- 2) Phospho fructokinase
- 3) Aldolase
- 4) Glyceraldehyde -3-phosphate dehydrogenase

5) an example of substrate level phosphorylation is :

- 1) Isocitrate Dehydrogenase
- 2) Enolase
- 3) Pyruvate kinase
- 4) Glyceraldehyde -3-phosphate dehydrogenase

6) The enzyme is inhibited by fluoride ions:

- 1) Hexokinase
- 2) Phospho fructokinase
- 3) Aldolase
- 4) Enolase

7) All the enzyme are regulatory EXCEPT:

- 1) Glycogen phosphorylase
- 2) Glucose-6-phosphate dehydrogenase
- 3) pyruvate kinase
- 4) Lactate dehydrogenase

8) ATP is generated in all the following reaction except





- 1) - Glyceraldehyde -3-phosphate dehydrogenase
 - 2) - 1,3 bis phosphoglycerate
 - 3) - pyruvate kinase
 - 4) Hexokinase
- 9) Which the following is not true regarding enzymes
- 1) - enzyme are protein and can be denaturated
 - 2) - enzyme act a very low concentration
 - 3) - enzyme will react with one compound or more
 - 4) enzyme are smaller than substrate
- 10) :all the following are true with regard to
- 1) - enzymes lower activation energy.
 - 2) they alter equilibrium of the reaction
 - 3) D-most of enzyme protein in nature they accelerate the chemical reaction
 - 4) most of enzyme protein in nature
- 11) enzyme which are synthesized in inactive form are called
- 1) - Co enzyme
 - 2) Apo enzyme
 - 3) - Lysozy
 - 4) - Talo enzyme
- 12) an example of layse is
- 1) - Glutathion synthetase
 - 2) fumarase
 - 3) - cholinesterase
 - 4) - amylase
- 13) all of the following are oxidoreductase enzyme except
- 1) - glutathion peroxidase
 - 2) - dioxygenase
 - 3) - catalase
 - 4) aldolases
- 14) the enzyme belonging to ligase class is
- 1) - glycogen synthase
 - 2) glutamin synthetase
 - 3) - porphobilinogen deaminase
 - 4) - histidine decarboxylase
- 15) : coenzyme are
- 1) dialyzable ,non protein molecules
 - 2) - colloidal protein molecules
 - 3) - structural analogues of enzyme
 - 4) - different forms of the same enzyme
- 16) which of the following causes a conformational change to the active site of an enzyme
- 1) - proteolytic cleavage
 - 2) - allosteric inhibitor
 - 3) - co enzyme





- 4) competitive inhibitor
- 17) in..... inhibition, the inhibitor is an end product of the enzyme action
- 1) non competitive
 - 2) allosteric
 - 3) cometitive
 - 4) feed back
- 18) the K_m value of an enzyme
- 1) the substrate concentration at half maximal velocity
 - 2) half the substrate concentration at maximal velocity
 - 3) dissociation constants of enzyme substrate complex
 - 4) the total enzyme concentration
- 19) in a competitive inhibition
- 1) K_m is increased and V-max is increase
 - 2) K_m is decreased and V-max is normal
 - 3) K_m is increased and V-max is normal
 - 4) K_m is decreased only
- 20) all the following are true as regards isoenzymes except
- 1) they have identical polypeptide chain
 - 2) they have different affinities to the substrate
 - 3) they can be separated by electrophoresis
 - 4) they are present in different tissue
- 21) digestive enzymes belong to the class of
- 1) hydrolases
 - 2) ligases
 - 3) lyases
 - 4) they are present in different cells
- 22) concerning allosteric effectors
- 1) allosteric effectors are usually analogs of the substrates
 - 2) the allosteric site of an enzyme is distinct from its substrate binding site
 - 3) allosteric effectors cause denaturation of the enzyme
 - 4) allosteric effectors cause non conformational change in the enzyme
- 23) all of the following metalloenzyme contain copper except
- 1) superoxide dismutase
 - 2) tyrosine
 - 3) glutathion peroxidase
 - 4) cytochrome oxidase
- 24) the enzyme
- 1) reduce the energy of activation
 - 2) increases total energy of substrate
 - 3) increases the equilibrium constant
 - 4) decrease total energy of the protein
- 25) in competitive inhibition
- 1) inhibitors has structural similarity to substrate
 - 2) K_m is decreased
 - 3) V-max is decreased
 - 4) reaction rate is independent of substrate concentration
- 26) as regards lactate dehydrogenase, all are correct except
- 1) it is formed of four subunits
 - 2) isoenzymes 5 increase in plasma, in liver disease





- 3) + there are 6 isoenzymes
- 4) - isoenzyme 1 increase in plasma in myocardial infarction
- 27) in non competitive inhibition
- 1) - K_m increases
- 2) - K_m decrease
- 3) + V_{max} decrease
- 4) - all
- 28) elevation of the blood level of the following enzyme helps in the diagnosis of hepatitis:
- 1) - Amylase
- 2) + alanine transaminase
- 3) - creatinine kinase
- 4) - acid phosphatase
- 29) isoenzyme are the enzyme with different amino acid sequences but the same
- 1) - tissue
- 2) + function
- 3) - Quaternary structure
- 4) - electrophoretic pattern
- 30) low energy bonds as:
- 1) + ester bond
- 2) - phosphate bond
- 3) - sulfur bond
- 4) - thio ester bond
- 31) / The key enzyme of glycolysis
- 1) - glucose -6- phosphate
- 2) - Glyceraldehyde -3-phosphate dehydrogenase
- 3) - phosphohexose isomerase
- 4) + phosphofructokinase
- 32) Catalytic activity of phosphofructokinase is increased by
- 1) + AMP
- 2) - ATP
- 3) - Fructose-1,6-bisphosphate
- 4) - Fructose-1- phosphate
- 33) complete oxidation of one molecule of glucose yields
- 1) - 12 ATP
- 2) - 24 ATP
- 3) + 38 ATP
- 4) - 29 ATP
- 34) Each turn of alpha – helix structure contain -----amino acid
- 1) + 3.6
- 2) - 2.6
- 3) - 6.3
- 4) - 6.2
- 35) Insulin is example of
- 1) - Alpha helix structure
- 2) + Quaternary structure
- 3) - Tertiary structure
- 4) - Pleated sheets
- 36) All about Globins are true except :
- 1) - Basic protein





- 2) - Composed of histidine
3) - Soluble in salt solution
4) Found in fish
- 37) Scleroproteins include the following except
1) - Keratin
2) - collagen
3) - elastin
4) d- glutelins
 glutelins
- 38) SCURVY is
1) - collagen disease
2) - deficiency in ascorbic acid
3) both
4) - none
- 39) All about Lactate is true Except
1) a. produced from aerobic glycolysis
2) - b. fate through cori cycle
3) - c. accumulated in muscles
4) - d. b and c
- 40) enzyme is activated by phosphorylation of amino acid
1) - cysteine
2) Serine
3) - glutamic acid
4) - lysine
- 41) vitaellin present in
1) - milk
2) egg yolk
3) - plants
4) - nut
- 42) All about collagen molecule true except
1) - there are more 12 type
2) - form about 30 % of total body protein
3) - consist of 3 poly peptide
4) soluble in all solvent
- 43) collagen is
1) - soluble and digestible
2) - soluble in an organic solvent
3) - not activated by vitamin C
4) none
- 44) myoglobin
1) - found in skeletal and cardiac muscle
2) - increases in myocardial infarction
3) all
4) - none
- 45) insulin
1) - quaternary protein
2) - formed of 2 subunit
3) - none





- 4) all
- 46) all the following coenzyme are involved in the pyruvate dehydrogenase reaction EXCEPT
- 1) Biotin
 - 2) NAD
 - 3) FAD
 - 4) Thiamine pyrophosphate
- 47) Pyruvate is converted to actyl COA by
- 1) Pyruvate dehydrogenase
 - 2) pyruvate carboxylase
 - 3) pyruvate kinase
 - 4) lactate dehydrogenase
- 48) phosphoglycerate kinase catalyzes conversion OF BPG into
- 1) 2,3 BPG
 - 2) 2-phosphoglycerate
 - 3) None
 - 4) 3- phosphoglycerate
- 49) All true about protein EXCEPT
- 1) Enzyme
 - 2) Transporter
 - 3) binding by glycosidic bond
 - 4) hormonal regulation
- 50) coagulation factors are
- 1) protien
 - 2) Enzyme
 - 3) fat
 - 4) carbohydrate
- 51) Hemolytic Anemia is caused by
- 1) A- pyruvate kinase deficiency
 - 2) B- Hexokinase deficiency
 - 3) C- Lactic acidosis
 - 4) D- A & B
- 52) Insulin stimulate
- 1) Synthesis of key enzyme
 - 2) Inhibition of key enzyme
 - 3) None
 - 4) Both
- 53) ATP produced from aerobic glycolysis is
- 1) A- 2 OR 4
 - 2) B- 4 OR 6
 - 3) C- 6 OR 8
 - 4) D- 8 OR 10
- 54) Fate of glucose through
- 1) oxidation
 - 2) storage through glycogen
 - 3) conversion to lipid or protein
 - 4) ALL
- 55) Cori cycle
- 1) Conversion of glucose into lactate in liver
 - 2) Conversion of lactate into lactate to glucose in peripheral tissue





- 3) none
4) Both
- 56) Aerobic glycolysis provide the mitochondria with pyruvate, which give
- 1) Acetyl COA
2) Lactate
3) 2,3 bis phosphoglycerate
4) 1,6 bis phosphate
- 57) hydroperoxidase enzyme utilizing
- 1) H₂O₂ as substrate
2) H₂O as substrate
3) H₂ as substrate
4) O₂ as substrate
- 58) Alteration of serum enzymes in malignancy may be due to :
- 1) production of increased amount of enzyme by tumor cell
2) release of intracellular enzyme due to cell damage
3) both
4) None
- 59) optimal temperature for enzymatic activity in human body is
- 1) A – 37 C
2) B – 38 C
3) C – 36 C
4) D – 39 C
- 60) Co enzyme for transfer of hydrogen
- 1) NAD
2) Vitamin C
3) Glutathione
4) ALL

