

# Archive Subject

Collected by



# Wareed Final Biochemistry Archive

**1-What of the following will increase the iron absorption from the cereal ?**

- a) tea
- b) coffee
- c) orange juice**
- d) water
- e) milk

**2-Which is the main component of synovial fluid ?**

\*\*\*Hyaluronic acid

**3-Which of the following statement concerning the enzymatic active site is incorrect ?**

\*\*\*consecutive correct responses

**4-Pepsin, an enzyme found in the stomach , acts at a PH of about 2 ,but it is not active at a PH of 7 . Why ?**

\*\*\*The optimal PH helps to maintain the enzymes in the tertiary structure .

**5-Which of the following statements is not correct about enzymes?**

\*\*\*The enzymes named according to the product formed .

**6-Selective qualities of enzymes are recognized as it's ?**

- a) Specificity
- b) Thermolabile
- c) site specific
- d) high turnover number
- e) high efficient

**7-Which type of regulation occurs in the slowest time frame ?**

\*\*\*New synthesis of enzymes through gene induction.

**8-An allosteric activator that affects  $K_m$  ,but not  $V_{max}$  does so by?**

\*\*\*Allosteric enzyme conformation to promote substrate binding.

**9-If the absolute concentration of the enzyme is unknown ,which of the following values can't be determined experimentally ?**

- a)  $V_{max}$  and  $K_m$  .
- b)  $V_{max}$  and  $V_i$
- c)  $V_i$

d) V-max

**10-The term that describes the theoretical value achieved when all enzyme substrate binding sites occupied by the substrate is ?**

a) V-max

b) Km

c) K1

d) K2

e) Vi

**11-Which of the following is true about the enzymes that are allosterically regulated ?**

a) They are usually multimeric enzymes .

b) we can apply "Michaelis-Menten equation" on it effectively

c) allosteric inhibitors are structural analogue of the substrate

d) they usually have allosteric site

e) the allosteric modulators are usually the substrate of the enzyme

**12-When the rate of enzymatic reaction is controlled by the amount of enzyme present , which of the following factors control the enzymatic level?**

a)Rate of transcription and protein synthesis .

b)Rate of translation .

c) Rate of reverse-transcription and protein synthesis.

**13-The affinity of an enzyme for a substance ,when the enzyme has  $K_m = 0.5$  , will be for the affinity of another enzyme for its substance ,when it has  $K_m = 0.05$ ?**

- a) Greater
- b) same
- c) Lesser

**14-What is the difference between glucose and fructose ?**

- a) Isomerase difference in their atom connectivity .
- b) the molecular formula
- c) the number of carbon atoms

**15-What is the type of isomers if the whole chiral center changed ?**

- a) Anomers
- b) Epimers
- c) Enantiomers
- d) Conformers

**16-which of these organs the glucose is the main form for energy ?**

- a) Liver

- b) Brain
- c) Kidney
- d) lung

**17-What is the chemical substance that is used as blood anticoagulant ?**

- a) Calcium
- b) potassium
- c) sodium

**18-What is the molisch reagent ?**

- a) Alpha naphthol
- b) 5-hydroxy methyl
- c) sulphuric acid

**19-The structure that protects the protein during folding is ?**

- a) Chaperons
- b) prolin

**20-One of these choices is correctly matched ?**

- a) tryptophan—----- niacin
- b) pyrimidine—-----cobalamin

**21-The sickle cell anemia affects the ?**

- a) beta chain
- b) alpha chain

**22- What is the amino acid that gives a yellowish color with the nin-hydrin ?**

- a) prolin
- b) arginin
- c) lysin

**23-The amino acid that is responsible for growth and development is ?**

- a) tryptophan
- b) Arginin
- c) leucin

**24- One of these amino acids is non-standard ?**

- a) Selenocysteine
- b) Glycin

**25-What is the vitamin that can be made from tryptophan ?**

- a) vitamin B6
- b) vitamin A
- c) vitamin B3

**26- if the N=3 of  $H_2CO_4$  , the mortality is ?**

- a) 2
- b) 1.5
- c) 0.5
- d) 6

**27- Methotrexate ,Warfarin and 5-fluorescent ,are inhibitors of which vitamin?**

- a) VITAMIN K
- b) VITAMIN A
- c) VITAMIN C
- d) VITAMIN B6

**28-One of the following isn't a motif ?**

- a) alpha sheets
- b) alpha-loop-alpha
- c) beta-alpha-beta

**29-Which of the following is incorrect?**

- a) Enzymes always undergoes conformational change when binding to substrate
- b) Enzymes change the outcome of the reaction that they catalyze

**30-Which of the following describes the binding of the enzyme with the substrate ?**

- a)  $V_{max}$
- b)  $K_m$
- c)  $K_1+K_2/K_m$
- d)  $K_1/K_2/K_m$
- e)  $K^{-1}/K^{-2}/K_m$

**31-The inhibitor that can either bind to enzyme or enzyme-substrate complex?**

- a) competitive inhibitor

b) non-competitive inhibitor

c) allosteric inhibitor

**32-The rate of reaction affected by the amount of the enzyme is reduced by?**

a) increase in substrate concentration

b) increase in enzyme concentration

c) increase temperature to optimum

d) increase product concentration

**33-What is the name of the (-OH) group?**

a) Hydroxyl group

b) Amines

c) Aldehydes

d) Ketones

**34-Regarding Uncompetitive inhibitor, which of the following sentences is true ?**

a) Increase the amount of the ES and decrease the rate of the reaction

b) Decrease the amount of the ES and decrease the rate of the reaction

c) Increase the amount of the ES and Increase the rate of the reaction

d) Decrease the amount of the ES and increase the rate of the reaction

e) No change in the amount of the ES and decrease the rate of the reaction

**35-P+E :**

\*\*\*SE is negligible

**36-What is the sugar that gives (negative result in Benedict test and positive results in Seliwanoff test )?**

- a) Glucose
- b) Fructose
- c) sucrose
- d) Maltose

**37- What is the vitamin that has glutamate in its structure?**

- a) Folate
- b) Niacin
- c) Thiamin

**38-Which one is an essential amino acid during pregnancy?**

- a) Arginin
- b) leucine
- c) Isoleucine
- d) Tryptophan

**39- What is blood sugar ?**

- a) Dextrose
- b) Cellulose

**40-Which of the following is non-polar amino acids ?**

a) Glycin

**41-(-NH) group, is called ?**

a) Amino group

b) alcohol group

c) hydroxyl group

**42-Which of the following is a buffer solution?**

\*\*\*CH<sub>3</sub>COO<sup>-</sup> /CH<sub>3</sub>COOH

**43-The most stabilized form in the cyclic carbohydrates is?**

\*\*\* Beta form, because all the (OH-) groups are equal

**44- What is the cause of Ehlers-Danlos syndrome?**

a) Abnormal procollagen gene

b) reduced collagen production

**45-What is the bond produced between two monosaccharides ?**

a) Glycosidic bond

b) peptide bond

**46-Ligase enzyme is?**

\*\*\* Join two molecules with covalent bond

**47- Which of these are polar covalent bond?**

a) P-Ca

- b) H—H
- c) Na—CL

**48-A boys' body lacks collagen, which amino acid would makeup for this lack?**

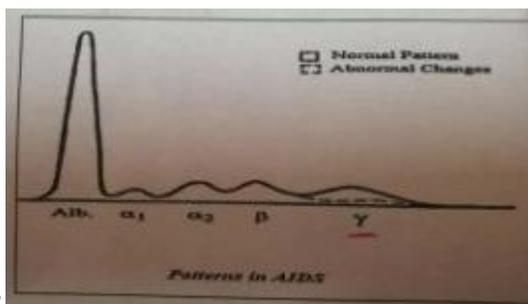
\*\*\*Glycin

**49-One of the following is incorrect according to Vitamins?**

\*\*\*\*Water soluble vitamins are more stable than fat soluble vitamins

**50-The cause of the formation of phenylketonuria ?**

\*\*\* Defect in the enzyme that is required to convert phenylalanine to tyrosine



**51- What is the diagnosis?**

\*\*\*\*AIDS

**52-There are 2 proteins . protein A ,which needs Q to fold and protein B ,which doesn't need Q to fold . So , what is Q ?**

\*\*\*\*\*Chaperon

**53-One of the following is correctly matched ?**

- a) Myoglobin —no quaternary structure
- b) Myoglobin—transports O<sub>2</sub>
- c) Hemoglobin—consists from 8 domains
- d) Hemoglobin —O<sub>2</sub> affinity is higher

**54- Which of the following is not a class of phospholipids ?**

- a) phosphatidylserine
- b) Lecithin
- c) phosphatidylinositol
- d) ceramide
- e) cholesterol

**55-which of the following is present in the mast cells ?**

\*\*\* Heparin

**56- Which of the following is false about haeworth and cyclic sugar?**

- a) carbonyl carbon becomes chiral center
- b) the two cycles are called anomers
- c) Haeworth projection is 3d of amino acids and carbohydrates
- d) either c1 or c2 can be anomeric carbon

**57-person suffers from eye problems ?**

- a) V.A deficiency
- b) V.k deficiency
- c) V.D deficiency
- d) V.C deficiency

**58-One best describes Vitamin E?**

\*\*\*Lipid soluble / Antioxidant

**59-What is the stationary phase and mobile phase respectively?**

- a) solid — liquid
- b) liquid—gas
- c) liquid —solid

**60-Apatient has symptoms of rickets and low levels of 25-hydroxy calciferol and high levels of 1,25 dihydroxycalciferol. What is the problem causing his symptoms?**

\*\*\*\*\*Calciferol receptors not working

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