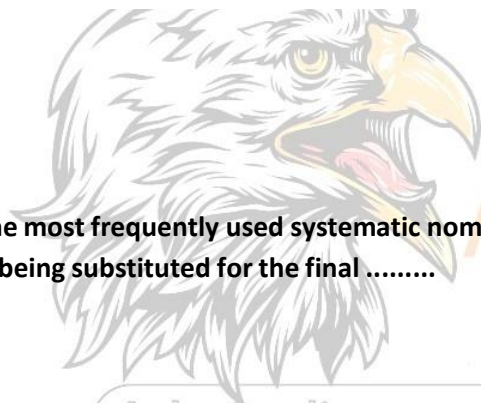


BIO202 - Biochemistry-I GRANDQUIZ MEGA FILE

LION GROUP OF ZOOLOGISTS FOR
2ND

ADMIN ASMAT KHAN NIAZI
03180401005



1. the most frequently used systematic nomenclature name the fatty acid after the hydrocarbon with -oic being substituted for the final

- a) e
- b) d
- c) a
- d) b

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2) the amide group of ----- serves as site of attachment for oligosaccharide chain in glycoprotein

- a) serine
- b) threonine
- c) asparagine
- d) all of these

3) the ion found in the haem group is what-----

- a) Mg^{+}
- b) O^{-2}
- c) Fe^{+2}

d) Fe^{+3}

4) hydrogenation of fatty acid leads to the hardening of natural oil and formation of margarine because

a) trans double bond are converted to cis double bonds

b) cis double bond is converted to trans double bonds

c) double bond are converted to single bond

d) single bond is converted to double bond

5) fatty acid are classified on the basis of hydrocarbon chain length include

a) medium chain fatty acid (6 -12c)

b) short chain fatty acid (2-4c)

c) long chain fatty acid (14-18 c)

d) all of the above

6) which of the following form of lipid are also referred as neutral lipid?

a) triacylglycerol

b) phospholipid

c) steroid

d) wax

7) the following salt is water insoluble

a) K

b) Na

c) Mg

d) Zn

8) which statement about amino acid at physiological ph. is true?

a) the carboxyl group is dissociated and amino group is protonated

b) only the carboxyl group is dissociated

c) amino group is protonated

d) there is no charge on either of the amino group or carboxyl group.

9) the sigmoidal binding curve of hemoglobin for oxygen is possible due to structure of hemoglobin.

- a) Multisubunit
- b) Single subunit

10) the formation of furfural product and their condensation with organic phenol to give characteristic colored compound forms the bases of biochemical tests used for the detection of carbohydrate an example of such test is

- a) Molisch 's test
- b) Benedict's test
- c) Ninhydrin test
- d) Grease spot test

11) One degradation product of hemoglobin is the brown bile pigment bilirubin .this step occur in

- a) bile
- b) liver
- c) kidney
- d) heart

12) the quaternary structure of hemoglobin is best described as

- a) dimer of two myoglobin dimers
- b) tetramer of identical subunit
- c) tetramer of four different subunit
- d) tetramer of two different subunit

13) degree of saturation (Y)(%) of oxygen binding sites on all myoglobin or hemoglobin molecule can be any value between.....

- a) 0 and 1
- b) -1 and +1
- c) 0 and 100

d) none of the above

14) immunoglobulin are Protein and have and Components.

a) catalytic, variable, constant

b) protective, variable, constant

c) protective, non-variable, constant

d) Enzymatic, variable, constant

15) the oxygen binding diet in hemoglobin and myoglobin?

a) heme group

b) globin group

c) ca +

d) Mg+

16) once a heme group is oxidized, what molecule is produce?

a) Methemoglobin

b) hemoglobin

c) myoglobin

d) hemoglobin c

17) Is an example of contractile protein.

a) myosin

b) amylase

c) hemoglobin

c) Fibrinogen

18) The R group is hydrogen atom in

a) Lysine

b) Alanine

c) Glycine

d) Proline

19) the three-dimensional arrangement of two or more polypeptide chain is called as

- a) primary structure
- b) secondary structure
- c) tertiary structure
- d) quaternary structure

20) what are the main things responsible for causing the Bohr shift?

- a) increase carbon dioxide pressure
- b) increase oxygen requirement
- c) increase H^+ ion
- d) carbon mono oxide high affinity for hemoglobin

21) which type of membrane lipid contain an acidic oligosaccharide ?

- a) globosid
- b) phosphatidylinositol
- c) cerebroside
- d) ganglioside

22) the of unsaturated fatty acid with double bond ends in

- a) enoic
- b) anoic
- c) dnoic
- d) none of the above

23) the carbon of the terminal methyl group is called the regardless of the chain length

- a) alpha
- b) beta
- c) gamma
- d) none

24) Hemoglobin, the red pigment in blood, consist of a protein component and the iron complex of derivative

a) porphyrin

b) iron

c) protein

d) benzene ring

25) oxyhemoglobin dissociation curve Bohr effect decrease affinity of the hemoglobin for..... gas caused by an increase of carbon dioxide ph. etc.

a) oxygen

b) carbon dioxide

c) ozone

d) nitrogen

26) the process by which oxygen enters the blood from the alveoli is

a) facilitated diffusion

b) diffusion

c) active transport

d) none

27) the pK₂ value for glycine is

a) 2.34

b) 5.97

c) 9.60

d) 7.65

28) current evidence suggests that diet rich in omega 3 fatty acid are beneficial particularly for

a) cardiovascular disease

b) Alzheimer disease

c) arthritis

d) all of the given

29) during the tense stage of hemoglobin, the binding sites are.....

a) hindered

b) opened

c) closed

d) replaced

30) fatty acid produces alkyl alcohol by..... of carboxylic group

a) esterification

b) oxidation

c) reduction

d) methylation

31) the following salt is water soluble

a) Ca

b) Mg

c) Zn

d) K

32) the partial pressure of oxygen needed to achieve half saturation of the binding sites is called.....

a) p50

b) p60

c) p70

d) none

33) the number of dissociated hydrogens in histidine is

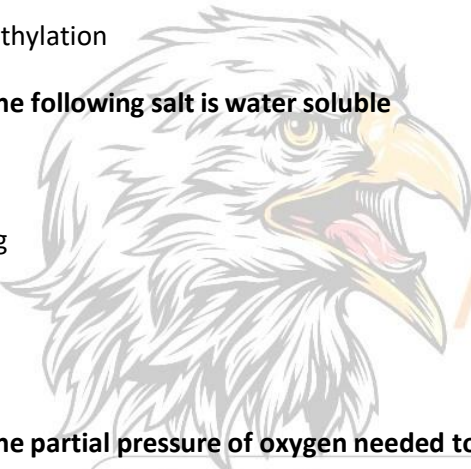
a) zero

b) one

c) two

d) three

34) the example of natural porphyrins includes.....



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- a) cytochrome c
- b) hemoglobin
- c) myoglobin

d) all option are correct

35) which would be a property of all the major types of lipid in this cell membrane

- a) they would be joined to each other through covalent bond
- b) they would be saponifiable in base and hydrolyzed in acid
- c) they would have polar heads and non-polar tails
- d) they would be composed of five carbon unit

36) protein can exist in the form of multi-subunits. An advantage of multi subunit structure is that the different subunit can have different activities and cooperate in a common function. this is best understood by the structure of the enzyme..... which exist as a multi protein complex

- a) hemoglobin
- b) ribozyme
- c) pyruvate dehydrogenase
- d) Ig A

37) what is the name of molecules formed when oxygen bind to hemoglobin

- a) oxyhemoglobin
- b) carbaminohemoglobin
- c) ox globin
- d) oxygen hemoglobin

38) all of the following are involved in stabilizing the three-dimensional structure of protein expect

- a) glycosidic bond
- b) hydrophobic interaction
- c) disulphide bridge
- d) hydrogen bonds

39) which of the following is found in brain tissue?

- a) D-alanine and D -glutamate
- b) free D-serine and D- aspartate
- c) free D-serine and D- alanine
- d) free D-serine and D- glutamate

40) the proximal histidine F8 of myoglobin binds directly to the of the heme group.

- a) iron
- b) magnesium
- c) zinc
- d) calcium

41) the pka value of acetic acid is.....

- a) 3.76
- b) 4.76
- c) 5.76
- d) 7.66

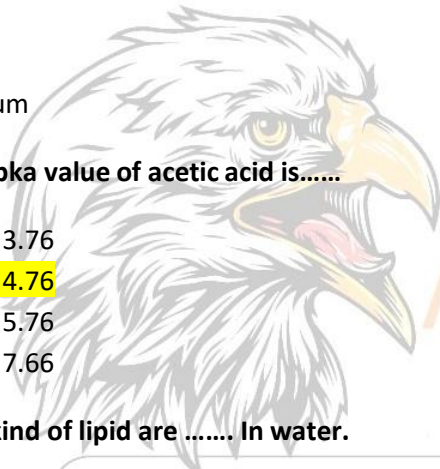
42) all kind of lipid are In water.

- a) miscible
- b) soluble
- c) insoluble
- d) all of the given

43) the..... bond formed by covalently joining of two amino acids through amide linkage.

- a) amide
- b) peptide
- c) sulphide
- d) carboxyl

44) the second degradation product of hemoglobin is green pigment biliverdin, the result of breakdown by oxidation occurs in....



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a) liver

b) heart

c) kidney

d) spleen

45) the ion found in haem group is what.....

a) Mg^{+2}

b) O_2^-

c) Fe^{+2}

d) Fe^{+3}

46) Alpha helices are the most common secondary structure found in protein, nearly all protein contain alpha helices in their membrane spanning domain

a) trans molecules

b) protective

c) transport

d) globular

47) which of the following statement about erythrocytes is correct

a) they lack nucleus

b) the clot bloods

c) they fight infection

d) they are produced in spleen

48) margarines are vegetable oil treated with partial hydrogenation to form a semi solid.....

a) butter

b) oil

c) fat

d) protein

49) the net effect of affinity of hemoglobin for the last oxygen bound is approximately times greater than its affinity for the first oxygen bound

a) 300

b) 302

c) 301

d) 356

50) some protein contain additional amino acid that arise by modification of amino acid already present in the peptide i.e. after the protein has been synthesized . an example of amino acid is

a) Lysine

b) 5-hydroxylysine

c) Peptidyl proline

d) Glutamic acid

51) all of the following are true for amino acid except

a) the genetic code specified and code for both standard and non-standard amino acid

b) the side chain of amino acid influences their solubility in water

c) the carbon atom present between the amino group and carboxyl group in the amino acid is known as a carbon.

d) in the formation of protein, amino acid are joined together by linkage known as peptide bond.

52) in myoglobin and hemoglobin, heme is covalently linked with.... Amino acid (eight residue of f helix.

a) histidine f8

b) alanine f8

c) both

d) none of them

53) identify the amino acid containing non polar ,aliphatic R groups.

a) phenylalanine, tyrosine and tryptophan

b) glycine, alanine, leucine

c) lysine, arginine, histidine

d) serine, threonine, cysteine

54) the octet rule refers to the tendency of an atom to prefer to have electrons in the valence shell.

a) 8

b) 9

c) 10

d) 11

55) what are the components of triglyceride molecules?

a) one glycerol and three fatty acids

b) one glycerol and two fatty acids

c) one glycerol and one cholesterol

d) one glycerol and two cholesterol

56) unesterified fatty acids are transported in the circulation in association with.....

a) albumin

b) gelatin

c) casein

d) none of the above

57) the change has no effect on the function of myoglobin.

a) conformational

b) amino acid

58) fatty acids occur in the body mainly as in natural fats and oils

a) proteins

b) esters

c) oils

d) fatty acids

59) fats are the of fatty acids and glycerol

- a) esters
- b) ethers
- c) isomer
- d) tautomer

60) during conformational changes each successive addition of oxygen shift the equilibrium further toward the.....state thus, the addition of oxygen in the lungs

- a) relaxed state
- b) tense state
- c) relaxed or tense state
- d) no change

61) the family of poly unsaturated fatty acid with double bond between the third and fourth of carbon from the methyl end of the chain are of special importance in human.....

- a) mental health
- b) nutrition

62) approximately how many hemoglobin are there in each red blood cells?

- a) 30 million
- b) 300 million
- c) 50 million
- d) 5 million

63) hemoglobin must bind with oxygen efficiently in the lungs , where the pO_2 is about.....mmHg and release oxygen in the tissue . where pO_2 is about mmHg

- a) 100 and 35 to 40
- b) 50 and 35 to 40
- c) 60 and 35 to 40
- d) 40 and 35 to 40

64) fetal hemoglobin shifts the oxygen saturation curve in what direction?

- a) right and down

b) left and down

65) what happen to the red blood cells if the heme group is removed from hemoglobin

a) red blood cells would not be able to bind oxygen

b) red blood cells would not be able to reproduce

c) white blood cells would not be able to reproduce

d) blood clots formation would be inhibited

66) in case of soap micelle, the hydrocarbon chains cluster in the inside and carboxyl group lie on the surface

a) non polar. polar

b) polar. non polar

67) which of the following fatty acid would have the lowest critical micelle concentration

a) C4-COOH

b) C5-COOH

c) C6-COOH

d) C8-COOH

68) The melting point of fatty acid depends upon chain length and

a) the shape of fatty acid

b) degree of unsaturation

c) the position of double bond

d) charge on the carbon

69) the process which convert unsaturated fatty acid to saturated fatty acid

a) hydrogenation

b) glycolysis

c) proteolysis

d) liquefaction

70) myoglobin is composed of a single peptide chain which has.....

- a) one O₂ binding site
- b) two O₂ binding site
- c) three O₂ binding site
- d) four O₂ binding site

71) the carbon of the terminal methyl group is called the regardless of the chain length.

- a) alpha
- b) beta
- c) gamma
- d) none

72) which is a characteristic of all the fatty acid components in this lipid?

- a) they all are hydrophobic because they contain oxygen
- b) they all contain unbranched carbon chain
- c) they all contain unconjugated cis double bonds
- d) they are all joined to glycerol through an ester bond

73) once a heme group is oxidized, which molecule is produced

- a) methemoglobin
- b) hemoglobin
- c) myoglobin
- d) hemoglobin c

74) the two ends of the poly peptide chain are known as the..... and terminus

- a) C, N
- b) R, S
- c) a, b
- d) D, L

75) which characteristic does this lipid share with wax

- a) both contain one or more carboxyl group
- b) both contain polar heads
- c) both contain three fatty acid
- d) both contain one or more ester bonds

75) motifs are also known as super secondary structure . an example of motif found in protein is the.....

- a) **b barrel**
- b) b sheet
- c) b turns
- d) a helix

76) the hydrolysis of starch by the enzyme amylase produces maltose. in human body maltose is further hydrolyzed by the enzyme maltase to produce.....

- a) galactose
- b) **glucose**
- c) maltotrisoe
- d) mannose

77) all amino acid except..... have a chiral carbon and have two possible isomers

- a) lysine
- b) **glycine**
- c) glutamic acid
- d)tryptophan

78) protein present in cell membrane may function as..... Or transporters

- a) **receptors**
- b) hormone
- c) immunoglobulins
- d)storage protein

79) aliphatic polar amino acids are in nature

- a) hydrophilic
- b) hydrophobic
- c) non-reactive
- d) aromatic ring tryptophan

80) the name of saturated fatty acid end in one of the following suffixes.

- a) -enoic
- b) -ol
- c) -dehyde
- d) -anoic

81) the strenuous exercise lowers the pO_2 of muscle tissue to about..... mmHg hence permits continued muscular activity

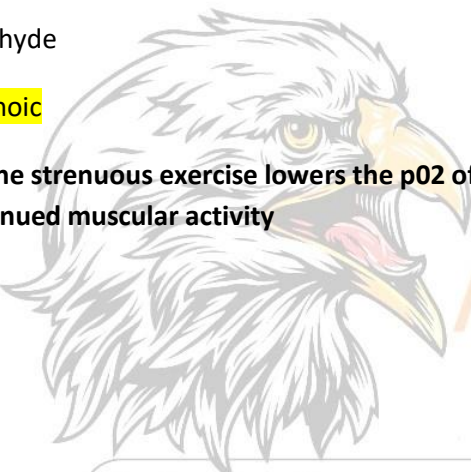
- a) 5
- b) 4
- c) 3
- d) 2

82) the surface of myoglobin is important for interacting with polar aqueous environment of cytosol.

- a) polar
- b) non polar
- c) aqueous
- d) hard

83) cholesterol is essential for normal membrane functions because it

- a) cannot be made by higher organism e.g. mammals
- b) spans the thickness of the bilayer
- c) keeps membrane fluid



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d) catalyzes lipid flip -flop in the bilayer

84) fatty acid are the carboxylic acid in which length of chain range from 4 to 36 carbons.

a) hydrocarbon

b) poly carbon

c) monosaccharide

d) disaccharide

85) the position of any in fatty acid are specified relative to the carboxyl carbon by superscript numbers following delta

a) Carbon atom

b) Hydrogen atom

c) Double bond

d) R group

86) myoglobin can bind to four oxygen molecules because it contain 4 heme group.

a) true

b) false

87) folic acid aids

a) in maturation of red blood cells and destruction of RNA.

b) in maturation of red blood cells and also required for RNA synthesis

c) in maturation of red blood cells and destruction of DNA

d) in maturation of red blood cells and also required for DNA synthesis.

88) the net charge on aniline in acidic solution (ph. less than two is)

a) negative

b) positive

c) neutral

d) first negative and then become neutral

89) the melting properties of fatty acid and lipid bilayer is due primarily to.....

- a) hydrogen bond
- b) Vander Waals forces
- c) electrostatic interactions
- d) covalent bonds

90) micelles of fatty acids in water are organized such that the face the solvent and the Are directed toward the interior.

- a) hydrophobic heads: hydrophobic tails
- b) hydrocarbon chains: carboxylic acid groups
- c) hydrophobic tails: hydrophobic heads
- d) carboxylic acid groups: hydrocarbon chains

91) which of the following molecules is typical fatty acids?

- a) a molecule that has even number of carbon atoms in a branched chain
- b) a polar hydrocarbon with that react with NaOH to form a salt
- c) an amphipathic dicarboxylic acid with unconjugated double bonds
- d) a molecule that has one cis double bond in a linear carbon chain

92) which of the following protect our heart and kidney from injury?

- a) fat
- b) muscles
- c) skin
- d) lubricant

93) upon reaction with strong acid pentose produce while hexoses produce....

- a) furfural, hydroxy methyl furfural
- b) hydroxy methyl furfural, furfural
- c) aldehyde, ketone
- d) deoxy sugars , amino sugars

94) histidine is generally considered to be a amino acid.

a) polar

b) non polar

95) eicosanoids are derived from eitherfatty acid.

a) omega -3

b) omega -6

c) none

d) omega -3 or omega -6



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96) phospholipid frequen



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tly have nitrogen containing bases and other substituent are

- a) glycerophospholipid the is glycerol
- b) sphingophospholipid the alcohol is sphingosine
- c) none
- d) both

97) many proteins have multiple poly peptide subunit. a multisubunit protein is also referred as a multimer. The repeating structural unit in such a multimer protein is called a

a) **protomer**

b) amino acid

c) monosaccharide

d) motif

98) which of the following is a characteristic of both waxes and terpenes?

a) **both can contain oxygen**

b) both can contain amino acid

c) both can contain a fatty acid

d) both can be non saponifiable

99) in the lung the ph. of the blood is Because carbon dioxide being exhaled.

a) neutral

b) **higher**

c) lower

d) zero

100) a molecule bound reversibly by a protein is called a....

a) **ligand**

b) lysosome

c) sub unit

d) chelator

101) hemoglobin consists of pairs of different protein, designed as alpha and beta chain

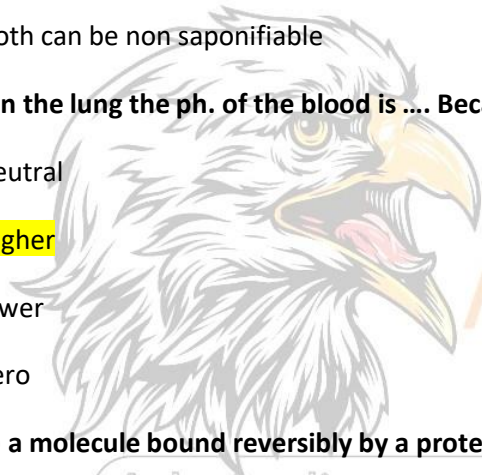
a) **two**

b) three

c) four

d) five

102) which is a characteristic of the lipid in a biological membrane



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- a) the fatty acid of lipid molecules is found in the interior of the membrane
- b) specific glycerophospholipid are distributed equally on the two-membrane surface
- c) lipid molecules are held in fixed position by non covalent bonds with protein
- d) the fluidity of membrane decreases with lower levels of saturated fatty acid

103) which of the following is imino acid

- a) proline
- b) lysine
- c) alanine
- d) histidine

104) immunoglobulin are in nature

- A) protein
- b) carbohydrate
- c) lipid
- d) none

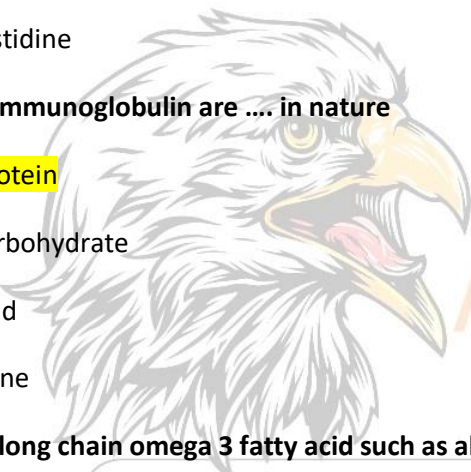
105) long chain omega 3 fatty acid such as alpha -linolenic acid and their derivative have Effect.

- a) inflammatory
- b) inhibitory
- c) antagonistic
- d) anti -inflammatory

106) based on its structural similarity to other lipid, lipid most likely function as

- a) vitamin required for vision
- b) a membrane component
- c) an energy storage molecule
- d) a sex hormone

107) are major structural elements of biological membrane.



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- a) protein
- b) phospholipid
- c) phospholipid and sterols
- d) none

108) lauric acid the saturated fatty acid having carbon chains

- a) 12
- b) 13
- c) 14
- d) 15

109) Structure of protein refers to particularly stable arrangement of amino acid residue giving rise to recurring structural patterns.

- a) primary
- b) secondary
- c) tertiary
- d) quaternary

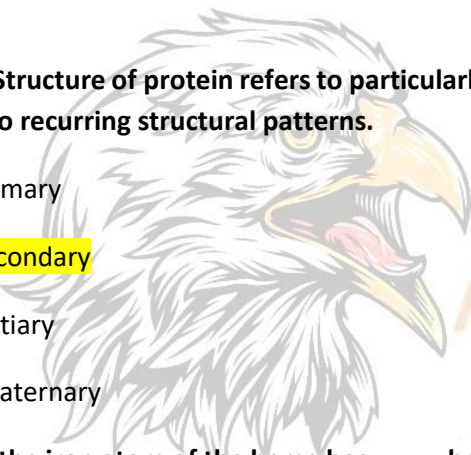
110) the iron atom of the heme has.....bond

- a) six
- b) seven
- c) eight
- d) nine

111) esters of fatty acid with higher molecular weight monohydric alcohol having oh group

- a) protein
- b) wax
- c) steroid
- d) lipid

112) a protein is called a protein if its amino acid composition and molecular conformation are unchanged from that found in natural states



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- a) native
- b) natural
- c) folded
- d) functional

113) a buffer is a solution that resist change in ph. following the addition of an acid or base. Among amino acid , only Has r group pka = 6.0 providing significant buffering near neutral ph. found in the intracellular and extracellular of most animal

- a) histidine
- b) glycine
- c) glucose
- d) aspartic acid

114) the 16-carbon saturated fatty acid named as

- a) propanoic acid
- b) butyric acid
- c) palmitic acid
- d)oleic acid

115) the enzyme that catalyzed the interchange, or shuffling of disulfide bond until the bonds of the native conformation are formed is called

- a) protein disulphide isomerase
- b) sulfide dehydrogenase
- c) protease
- d)protein lyase

116) how many amino acids in the beta chains of hemoglobin

- a) 146
- b)141
- c)140
- d)435

117) sickle cells are very fragile and rupture easily. this results in.....

- a) **anemia**
- b) blood cancer
- c) hemophilia
- d) aplastic anemia

118) That is a fatty acid with one double bond and is abbreviated as 18:1

- a) palmitic acid
- b) glacial acetic acid
- c) tartaric acid
- d) **oleic acid**

119) disulphide bonds are formed between two molecules of the amino acid cysteine. The reaction involve

- a) **oxidation of sulfhydryl group**
- b) reduction of sulfhydryl group
- c) methylation of carbon
- d) phosphorylation of a carbon

120) certain protein that are denatured by heat, extreme ph., or denaturing agent Can regain their native structure and biological activity if returned to a condition in which the native conformation is stable.an example is the enzyme ribonucleases . a which is denatured in asolution in the presence of reducing agent.

- a) **concentrated urea**
- b) buffer
- c) normal saline
- d) serum

121) the native conformation of the protein is dependent on its folding pattern are dictated by

- a) **thermodynamics**
- b) hydraulics

c) conformation of peptide bond

d) function of protein

122) the hydrolysis of starch by an enzyme amylase produces maltose. In human maltose is further hydrolyzed by the enzyme maltase to produce.....

a) galactose

b) glucose

c) malt trioses

d) mannose

123) which type of membrane lipid contain an acidic oligosaccharide

a) globoids

b) phosphatidylinositol

c) cerebroside

d) ganglioside

124) which of the following is not the component of phospholipid?

a) phosphate

b) protein

c) glycerol

d) alcohol

125) how many amino acid are in the alpha chain of hemoglobin

a) 141

b) 146

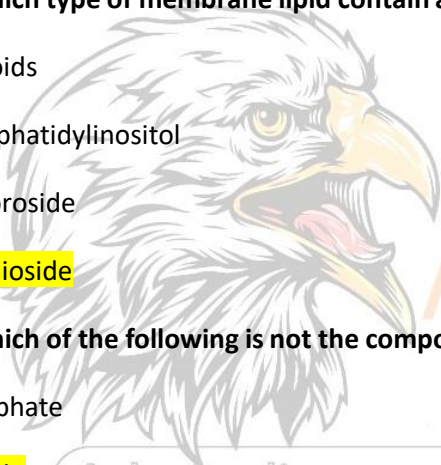
c) 543

d) 144

126) one degradation product of hemoglobin is the brown bile pigment called as.....

a) bilirubin

b) biliverdin



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127) which statement about amino acids at physiological ph. is true

- a) the carboxyl group is dissociated and amino group is protonated
- b) only the carboxyl group is dissociated
- c) only amino group is protonated
- d) there is no change on either the carboxyl group or the amino group

128) the carbon atom in the fatty acid is numbered , beginning with the carboxyl carbon as

- a) c1
- b) c2
- c) c3
- d) c4

129) a molecule bound reversibly by protein is called a....

- a) ligand
- b) lysosome
- c) subunit
- d) chelator

130) oxy hemoglobin dissociation curve Bohr effect decrease affinity of hemoglobin for Gas caused by an increase of carbon dioxide ph. etc.

- a) oxygen
- b) carbon dioxide
- c) ozone
- d) nitrogen

131) protein folding is governed by thermodynamics; the folding process involves a decrease in randomness and thus a decrease in....

- a) entropy
- b) flexibility
- c) stability

d) interactions formed

132) the characteristic pH at which the net electric charge on amino acid is zero is called.....

a) cationic pH.

b) **isoelectric point**

c) ampholytic point

d) anionic point

133) eicosanoids are derived from either Fatty acid.

a) Omega 3

b) omega 6

c) none

d) **omega 3 or omega 6**

134) electrostatic interaction helps stabilize the three dimensional tertiary structure of protein. These interactions are formed as a result of ionic bonds formed between the positively charged amino acids. The positive charge is usually present on Amino acid

a) **basic**

b) acidic

c) neutral

d) all

135) a loss of three dimensional structure sufficient to cause loss of function of protein is called.....

a) **denaturation**

b) catalysis

c) reactivations

d) misfolding

136) beta sheets are a type of regular secondary structure that maximize hydrogen bonding between the peptide backbone. The sheet is described as if the polypeptide strands run in the same direction (as defined by their amino and carboxy terminals)

a) anti parallel

b) parallel

c) aligned

d) helical

137) apart from 20 standard amino acid, some other amino acid may also be synthesized and become a part of the protein an example of such amino acid is..... Which is naturally occurring .generally coded amino acid used by some methanogenic archaea

a) pyrrolysine

b) phenylalanine

c) aspartic acid

d) sialic acid

138) oxygen stored in red muscle myoglobin is released during O₂ deprivation (e.g., severe exercise) to be used in muscle mitochondria for.....

a) aerobic synthesis of ATP molecules

b) An aerobic synthesis of ATP molecules

c) aerobic synthesis of more O₂

d) An aerobic synthesis of more O₂

139) the form of an amino acid that has both positive and negative charge is called

a) zwitterion

b) non -ionic

c) cation

d) anion

140) the surface of myoglobin is polar, important for interacting with..... Aqueous environment of cytosol

a) polar

b) non polar

c) organic

d) inorganic

141) cluster of twisted strands of beta sheet form the core of many..... protein

- a) fibrous
- b) globular
- c) collagenous
- d) structural

142) the 18 carbons with one double bond named as

- a) palmitic acid
- b) propanoic acid
- c) oleic acid
- d) butyric acid

143) fats are abundantly found in

- a) reproductive tissue
- b) vegetable tissue

143) cis -9- hexadecenoic ACID, THAT IS THE FATTY ACID WITH NUTRITIONAL significance is commonly known as..... acid

- a) oleic
- b) palmitic
- c) palmitoleic
- d) none

144) the quaternary structure of human hemoglobin is best described as

- a) dimer of two myoglobin
- b) tetramer of identical subunit
- c) tetramer of four different subunit
- d) tetramer of two different subunit

145) fatty acids are found in the unesterified form as A transport form in the plasma

- a) oils

b) free fatty acid

c) esters

d) bounded fatty acid

146) the gas is used for aerobic synthesis of ATP in muscle mitochondria during the case of severe exercise

a) oxygen

b) carbon dioxide

c) ozone

d) none

147) D-amino acid are also nonstandard amino acid that occur naturally . which of the following D-amino acid is found in the cell wall of gram-positive bacteria?

a) D-alanine

b) 5 hydroxy lysine

c) D-serine

d) cysteine

148) what is the solubility of lipid in water

a) partially soluble

b) soluble

c) insoluble

d) partially insoluble

149) the cervices (pocket) created by..... amino acid in the interior of myoglobin creates a binding pocket for heme

a) Polar

b) non polar

c) Basic

d) acidic

150) all of the following are true for lactose except

- a) it is reducing sugar
- b) it is found abundantly in grape juice
- c) it is dextrorotatory
- d) it is made of galactose and glucose

151) catalytic protein is called as

- a) amino group protein
- b) enzyme
- c) catalysis
- d) carbon R group chain

151) which of the following occur when hydrogen is reacted with vegetable oils?

- a) the hydrogenated vegetable oil will contain fewer trans fats
- b) the hydrogenated vegetable oil will become solid at room temperature
- c) the hydrogenated vegetable oil will become oil
- d) the hydrogenated vegetable oil will become saturated fat.

152) the folding of Contiguous segments of polypeptide form secondary structure of protein

- a) 3-20
- b) 3-30
- c) 3-300
- d) 20

153) the three-dimensional arrangement of two or more polypeptide is called

- a) primary structure
- b) secondary structure
- c) tertiary structure
- d) quaternary structure

154) storage protein has ability to bind and store specific element or compounds..... is an example of storage protein that store copper

- a) hemoglobin
- b) **ferritin**
- c) ceruloplasmin
- d) urease

155) this effect of ph. and carbon dioxide concentration on the binding and release of oxygen by hemoglobin is called the

- a) **Bohr effect**
- b) nelson effect
- c) nucleus effect
- d) electron removal

156) the following sterol is present in cell membrane of fungi

- a) campesterol
- b) **ergosterol**
- c) stigmasterol
- d) sitosterol

157) osazone are obtain by adding a mixture of phenyl hydrazine hydrochloride and sodium acetate to sugar solution and heating in water bath for 45 mint which two atom in the sugar molecule are involved in osazone formation?

- a) **C1,C2**
- b) C1, C6
- c) C1 , C4
- d) C3 ,C5

158) esters of fatty acid containing groups in addition to an alcohol and fatty acid is called as

- a) derived lipid
- b) **complex lipid**
- c) simple lipid
- d) none

159) excess iron has a significant affinity for specific organs particularly

- a) the lungs, liver, and endocrine gland
- b) the heart, liver, and endocrine gland
- c) endocrine gland
- d) liver only

160) out of 20 amino acids contain a secondary amino group is called an imino acid

- a) proline
- b) serine
- c) histidine
- d) methionine

161) current evidence suggests that diet rich in omega 3 fatty acid are beneficial particularly for

- a) cardiovascular disease
- b) Alzheimer disease
- c) arthritis
- d) all

162) margarines are vegetable

- a) Oil
- b) Wax
- c) Carbohydrate
- d) protein

163) the main difference between saturated and unsaturated fatty acid is.....

- a) the number of carbon atom
- b) the presence of keto group
- c) the one is absent from phospholipid
- d) the presence of double

1. Which of the following example of derive lipid

steroid

2. Poly unsaturated fatty acids (like alpha-linolenic acid) with a double bond between C-3 and C-4 called

Omega 3,4

3. which of the following is an example of steroid

steroid

4. Both glycogen and cellulose are made up of glucose subunits, However, while glycogen is

Poly...,disac...

5. The glycerophospholipids are composed of two fatty acid attached to glycerol and one of the following head groups

Choline phosphate

6. During relaxed state of haemoglobin the binding sites are

Hindered

7. 18-carbon oleic acid, with one double bond is abbreviated as

18:1

8. Fetal hemoglobin

Right to down

9. In Polyunsaturated fatty acids, the number of the methyl group is KNOWN

Alpha

10. The number of the amino acid residues in the myoglobin are found in helices with between 100 and 120

90

11. In second structure of protein 'H' residues reflect the hydrogen bonds

Secondary structure of alpha helix non polar

12. Apart from the 20 standard amino acids, some other amino acids may also be synthesized and become a part of the protein, An example of such an amino acid used by some methanogenic archaea is

Ans: proline

13. Esters of fatty acids containing groups in addition to an alcohol and a carboxylic acid called as

Ans: complex lipids

14. The hydrolysis of sucrose to glucose and fructose is catalyzed by sucrase which is also present in

Ans: pancreas

15. An important part of the amino

Ans: 58%

16. Transporting lipids in the blood are combination of lipids and

Ans: protein

17. The production of marrow cells takes place within

Ans: bone marrow

18. Hydrogenated fat is used by many food producers to provide following properties

Ans: all

19. Fatty acids occur in

Ans: esters

20. In case of severe hypoxia a vertebrate releases the ~ stored in red muscle myoglobin is released

Ans: oxygen

21. With reference to carbohydrate structure, which type of isomers have nearly identical chemical properties but differ in their interaction

Ans: enantiomers

22. Phospholipids frequently have nitrogen containing bases and other substituents are

Ans: sphingophospholipids...the alcohol is sphingosine..

23. The side chain of _____ amino acids are proton acceptors

Ans: negatively charged

24. What are the components of a triglyceride molecule?

Ans: one glycerol and three fatty acids

25. What are the functions of dietary fat?

Ans: all of above

26. Which of the following statements about hydrogen bonds is FALSE?

Ans: for all the information...

27. The family of polyunsaturated fatty acids (PUFAs) with a double bond between the third and fourth carbon from the methyl end of the chain are

Ans: n-3 fatty acids

28. The process by which oxygen enters the blood from the alveoli is

Ans: diffusion

29. Myoglobin is found in

Ans: muscle

30. The process which

Ans: proteolysis

31. Anemia can be classified

Ans: 5

32. A plot of degree

Ans: oxygen dissociation curve

33. Approximately how many hemoglobin molecules are there in each red blood cell?

Ans: 300 million

34- concentrated solutions Certain proteins that are denatured by heat, extremes of pH, or denaturing reagents lose native structure and biological activity if returned to conditions in which the native conformation is stable. An example is the enzyme ribonuclease A which is denatured in the presence of a reducing agent.

normal saline concentrated solutions

35- How many amino acids in the B chains of hemoglobin
141

36- The protein, or globin portion of myoglobin thus creates a special microenvironment that permits the reversible binding of one oxygen molecule (oxygenation)
146

37- The protein, or globin portion of myoglobin thus creates a special

microenvironment for permits the reversible binding of one oxygen molecule (oxygenation)

38- Which property does this lipid share with a typical triacylglycerol
Both contain a long chain alcohol

39- Carbon dioxide and water combine to form
Carbonic acid

40- Alpha helices are found in very diverse proteins such as which is a
globular protein and Keratin which is a fibrous protein and

Keratin myoglobin

41----- proteins involved in respiration include hemoglobin, myoglobin and
Cytochrome

42-----Natural lipids are readily soluble in
Organic solvent

43-----Is 1 mmHg for myoglobin and 28.6 mmHg for hemoglobin

Partial pressure of Oxygen

44-----How many amino acids in the α chain of hemoglobin

141

45-----Fatty acids are found in the unesterified form as a transport form in the
plasma

Esters

46-----The following sterol is present in the cell membrane of fungi?

Ergosterol

47-----Haemoglobin transports about - tissues to the lungs and the
kidneys 20% of the total H^+ and 15% to 20% of the CO_2 load

40%

48-----Name the two essential fatty acids?

Linoleate and arachidate

49-----The conformational change of hemoglobin is usually described
as changing from T (Tense) state to R (Relaxed) state with a low affinity for
Oxygen

True

50-----The side chain of.... amino acids are proton acceptor

Proton acceptor

51-----The side chain of.... amino acids are proton acceptor

Acidic group

52-----The gas.... is used for aerobic synthesis of ATP in muscle mitochondria during the severe exercise

Oxygen

53-----The two ends of the polypeptide chain are known as the ..and...

C N

54-----The melting point of fatty acids depends upon chain length and

Degree of unsaturation

55-----The substitution of a hydrogen for the hydroxyl group at C-6 of L-mannose produces

L-thamnose

56-----Immunoglobulins are in nature

Carbonyl trades

57-----What are the main things responsible for causing the Bohr Shift?

increased carbon dioxide partial pressure

58----- The pKa value for acetic acid is

4.76

59----- In the lungs, the pH of the blood is ,.....because CO₂ is being

Higher

60----- The human ABO blood groups best illustrate the biomedical importance of carbohydrates. The blood groups, A and B differ from O on the basis of antigen. Compared to O antigen, an extra monosaccharide is present in both A and B. For antigen A the extra monosaccharide molecule is

N-acetyl galactosamine

61----- Which of the following is found in brain cells?

Free D series and D aspartate

62----- Histidine is generally considered to be a...amino acid

Polar

63----- The three dimensional arrangement of two or more polypeptides

is called

Quaternary structure

64-----At the relatively low pH and high CO₂ concentration of peripheral tissues, the affinity of haemoglobin for oxygen as H⁺ and CO₂ are bound, and O₂ is released to the tissues

Decrease

65-----The degree of saturation (%) of oxygen-binding sites on all myoglobin or hemoglobin molecules can vary between and

Zero and 100 percent

66-----: A buffer is a solution that resists change in pH following the addition of an acid or base. Among acids, only histidine has an R group (pK_a ~6.0) providing significant buffering power near the neutral pH usually found in the intracellular and extracellular fluids of most animals..

Histidine

67-----structure of proteins refers to particularly stable arrangements of giving rise to recurring structural patterns

Secondary

68-----The pK_a value for acetic acid is

5.76

69-----Proteins involved in respiration include hemoglobin, myoglobin and

Cytochrome

70-----Which of the following is non polar, aliphatic amino acid?

Leucine

71-----: Which statement best describes 'domains' found in proteins?

It is a section of protein structure sufficient to perform a particular chemical or physical function such as

72-----The most frequently used systematic nomenclature names the fatty acid after the hydrocarbon with or without being substituted for

e

73-----The cleft (Pocket) created by,..... -amino acids in the interior of myoglobin create a binding site

Non polar

74-----At the highest partial pressures of oxygen, the saturation of oxygen slows down because the oxygen is displaced by carbon dioxide

75-----Which of the following is positively charged at physiological pH?

Aspartate

76-----One degradation product of Haemoglobin is the brown bile pigment bilirubin. This step occur in

Heart

77-----In the human diet, all the cholesterol comes from

Animal product

78-----Storage proteins have the ability to bind and store specific elements or compounds

Ferritin

79-----Certain proteins that are denatured by heat, extremes of pH or denaturing reagents can regain their native structure. Ribonuclease A which is denatured in a solution in the presence of a reducing agent

Serum

80-----The form of an amino acid that has both a positive and a negative charge is called a

Albumin

81-----In Benedict's test. The.... are produced, which form red precipitate

Coprius ions

82.....Name the two essential fatty acids?

Linoleate and linolenate

83-----Cis-9-hexadecenoic acid, that is a fatty Acid with nutritional significance is common

Palmitoleic

84-----The oxidation of carbonyl carbon in monosaccharides yield products

Furfurals

85-----Based upon the properties of the R group, mainly polarity and ability to interact with water, amino acids

Five

86-----Protein, is called a protein if its amino acid composition and molecular conformation

Natural

87-----Hemoglobin consists of pairs of different proteins, designated as α and β chains

2

88-----Once the P_{aO_2} reaches.... mm Hg the curve is almost flat, indicating there is

60

89-----The conformational change of hemoglobin is usually described as changing from state with low affinity

T(tense) to R

90-----In case of severe exercise, the..... stored in red muscle myoglobin is

Carton

91---Many antibiotics like erythromycin corden sbga dervatives such as.... that are important

Amino suger

92-----Which type of membrane lipid contains an acidic oligosaccharide?

Ganglioside

93-----Monosaccharides can be subdivided further depending upon

Number of carbon atoms and aldehyde or keton groups

94-----The partial pressure of cxygen (P50) is a conventional measure of hemoglobin affinity

Oxygen

95-----Hemoglobin has a structure

Quarternary

96-----What are the main things responsible for causing the Bohr Shift?

increased carbon dioxide partial pressure

97-----: During releand stage of hemoglobin the bindings

Hindered

98-----Osazones are obtained by adding a modure of phenyl hydrazine hydrochloride and sodium acetato to a

C1 and C2

99-----Carbonic acid dissociates to form

H⁺ and H₂CO₃

100-----Crystalline derivatives of monosaccharide's, formed from phony hydrazine on

Osazone

101-----.....is an example of a contractile protein

Myosin

