

c) α -1-4 linkage between D-glucose units	d) α -1-2 linkage between D-glucose units
13. Chitin consists of	
a) N-acetyl muramic acid	b) N-acetyl glucosamine
c) D-glucose units	d) N-acetyl muramic acid and N-acetyl glucosamine
14. The Polysaccharide found in the exoskeleton of insects is-	
a) Hyaluronic acid	b) Cellulose
c) Chitin	d) Chondrosamine
15. From the abbreviated name of the compound Gal (β 1 $\rightarrow$ 4) Glc, we know that:	
a) The glucose residue is the β anomer.	b) C-4 of glucose is joined to C-1 of galactose by a glycosidic bond.
c) The galactose residue is at the non-reducing end.	d) The compound is in its furanose form.
16. Which out of the following is a structural homopolysaccharide?	
a) Hyaluronic acid	b) Chitin
c) Inulin	d) Starch
17. α-D-Glucose and β-D-Glucose are	
a) Stereo isomers	b) Anomers
c) Keto- Aldose Isomers	d) Optical isomers
18. A tripeptide functioning as an important reducing agent in the tissues is	
a) Bradykinin	b) Kalidin
c) Tyrocidin	d) Glutathione
19. At isoelectric pH, an amino acid exists as	
a) Anion	b) Cation
c) Zwitterion	d) None of these
20. Acidic amino acids include	
a) Arginine and glutamate	b) Aspartate and asparagine
c) Aspartate and lysine	d) Aspartate and glutamate
21. An amino acid that does not take part in α helix formation is	
a) Histidine	b) Tyrosine
c) Proline	d) Tryptophan
22. Electrostatic bonds can be formed between the side chains of	
a) Alanine and leucine	b) Leucine and valine
c) Aspartate and glutamate	d) Lysine and aspartate
23. Which of the characteristics below apply to amino acid Glycine?	
a) Optically inactive	b) Hydrophilic, basic and charged
c) Hydrophobic	d) Hydrophilic, acidic and charged
24. Which of the amino acids below is the uncharged derivative of an acidic amino acid?	
a) Cystine	b) Tyrosine
c) Glutamine	d) Serine
25. Tryptophan could be considered as precursor of	
a) Melanotonin	b) Thyroid hormones
c) Melanin	d) Epinephrine
26. What is a side chain?	
a) portion of the amino acid that gives each amino acid its unique properties	b) chain of repeating carbon and nitrogen atoms, linked by peptide bonds
c) part of the amino acid that is not involved in making a peptide bond	d) a and c are correct
27. Which of the following is/are unsaturated fatty acids?	
a) Linoleic acid	b) Oleic acid
c) Palmitoleic acid	d) All of these
28. Antibodies which bind to and immobilize antigens are glycolipid	

- a) True
c) False
29. Hydrolysis of fats by alkalies into fatty acids and glycerol is called
a) Coagulation
b) Saponification
c) Suspension
d) Colloidal
30. The fats and oils are respectively rich in
a) Unsaturated fatty acids
b) Saturated fatty acids
c) Saturated and unsaturated fatty acids
d) None of these
31. The number of double bonds in Arachidonic acid
a) 1
b) 3
c) 2
d) 4
32. The following is not a phospholipid
a) Sphingomyelin
b) Lecithin
c) Cephalin
d) Cerebroside
33. Examples of monounsaturated fatty acids are:
a) Oleic acid
b) Arachidonic acid
c) Palmitic acid
d) Linolenic acid
34. The following reaction represent condensation reaction $G + G + G \rightarrow G-G-G + 2H_2O$
a) True
c) False
35. Triacylglycerols are
a) Energy rich compounds
b) Nonpolar in nature
c) Can be stored in unlimited amounts
d) All of the above
36. Cholesterol is a precursor of all except
a) Bile salts
b) Bilirubin
c) Steroids
d) vitamin D
37. A membrane phospholipids that does not contain glycerol is?
a) Lecitin
b) Sphingomyelin
c) Cerebroside
d) Ceramide
38. 49. Which one of the following substances is an intermediate in the synthesis of both glycerol-containing phospholipids and triacylglycerol?
a) Acetocetyl CoA
b) Choline
c) Phosphatidic acid
d) CDP-Ethanolamine
39. Aspartam are 200 time sweeter than sugar, doesn't given for PKU patient
a) True
c) False
40. Hemoglobin are the first protein for which complete tertiary structure was determined
a) True
c) False
41. What enzyme do cows have that allows them to digest cellulose?
a) beta-amylase
b) beta-phosphorylase
c) alpha-amylase
d) beta-lactase
42. What type of non-covalent interaction helps to stabilize the secondary structure of proteins?
a) Charge-charge interactions
b) Hydrogen bonding
c) Van der waals forces
d) Hydrophobic interactions
43. In the digestive process, the macromolecules are broken down into small molecules that can cross cell membranes. This process is called?
a) Hydrolysis
b) Dehydration synthesis
c) Cellular respiration
d) Protein synthesis
44. Water (H₂O) has a bent shape, resulting in an unequal distribution of the electrons. Oxygen, which is more electronegative than the hydrogen's, has a greater pull on the electrons, giving the oxygen a partial negative charge and the hydrogen's a partial

45. The pH of a solution is the negative logarithm of the concentration of H^+ ions. With this in mind, which solution has the greatest concentration of H^+ ions?

- | | |
|-------------------------|--------------------------|
| a) A solution with pH=1 | b) A solution with pH=7 |
| c) A solution with pH=2 | d) A solution with pH=10 |

46. What determines the tertiary structure of a protein?

- | | |
|----------------------|-----------------------------|
| a) α -helices | b) β -sheets |
| c) Primary structure | d) Hydrophobic interactions |

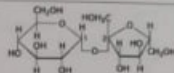
47. Reducing Sugars can reduce metal ions in solution. Which of these sugars are reducing sugars?

- | | |
|-----------------------------------|-------------------------------------|
| a) Those with a free ketone group | b) Those with a free aldehyde group |
| c) Those with a chiral carbon | d) All of the above |

48. The addition of a phosphoryl group to a OH group of a sugar by a kinase is a form of:

- | | |
|--------------------|-------------------|
| a) Dehydrogenation | b) Reduction |
| c) Oxidation | d) Esterification |

49. Identify the correct name for the following structure



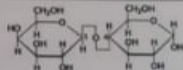
- | | |
|------------|---------------|
| a) Maltose | b) Sucrose |
| c) Lactose | d) Cellobiose |

50. Identify the correct name for the following structure



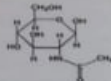
- | | |
|--------------|---------------|
| a) Histidine | b) Asparagine |
| c) Valine | d) Cysteine |

51. Identify the correct name for the following structure



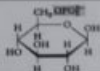
- | | |
|------------|---------------|
| a) Maltose | b) Sucrose |
| c) Lactose | d) Cellobiose |

52. Identify the correct name for the following structure



- | | |
|---------------------------------------|-------------------------------------|
| a) N-acetyl- β -D-glucosamine | b) β -D-glucose-6-Phosphate |
| c) N-acetyl- β -D-galactosamine | d) β -D-galactose-6-Phosphate |

53. Identify the correct name for the following structure



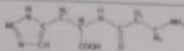
- | | |
|-------------------------------------|---------------------------------------|
| a) β -D-glucose-6-Phosphate | b) N-acetyl- β -D-glucosamine |
| c) β -D-galactose-6-Phosphate | d) N-acetyl- β -D-galactosamine |

54. Identify the correct name for the following structure



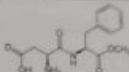
- | | |
|------------------|------------------|
| a) Aspartic acid | b) Lactic acid |
| c) Glutamic acid | d) Palmitic acid |

55. Identify the correct name for the following structure



- | | |
|--------------------------------|--|
| a) β -alanyl-L-histidine | b) L-alanyl-L-phenylalanyl-glycine |
| c) L-phenylalanyl-L-alanine | d) β -alanyl-L-histidine -L- glycine |

56. Identify the correct name for the following structure



- | | |
|----------------------------------|-------------------------------|
| a) L-histidine -L- phenylalanine | b) D-aspartyl-D-phenylalanine |
| c) L-histidine -L- phenylalanine | d) L-aspartyl-L-phenylalanine |

57. Identify the correct name for the following structure



- | | |
|----------------|----------------|
| a) L-Glucose | b) D-Glucose |
| c) L-Galactose | d) D-Galactose |

58. Identify the correct name for the following structure



- | | |
|---------------------|--------------------|
| a) Linoleic acid | b) Archedonic acid |
| c) Palmitoleic acid | d) Oleic acid |

59. Two sugars which differ from one another only in configuration around a single carbon atom are termed

- | | |
|--------------------|------------------|
| a) Epimers | b) Anomers |
| c) Optical isomers | d) Stereoisomers |

60. α -D-glucose and β -D-glucose are

- | | |
|------------------|--------------------|
| a) Stereoisomers | b) Epimers |
| c) Anomers | d) Optical isomers |

61. The carbohydrate of the blood group substances is

- | | |
|--------------|------------|
| a) Sucrose | b) Fucose |
| c) Arabinose | d) Maltose |

62. The monosaccharide units are linked by 1 $\rightarrow$ 4 glycosidic linkage in

- | | |
|--------------|---------------|
| a) Maltose | b) Sucrose |
| c) Cellulose | d) Cellobiose |

63. The polysaccharide used in assessing the glomerular filtration rate (GFR) is

- | | |
|-------------|-----------|
| a) Glycogen | b) Starch |
| c) Inulin | d) Chitin |

64. The polysaccharide found in the exoskeleton of invertebrates is

- | | |
|-------------|-----------|
| a) Glycogen | b) Pectin |
| c) Inulin | d) Chitin |

ressine	d) Leucine
of the following is a pentapeptide?	
artame	
opressine	b) Glutathione
entapeptide functioning as an important	d) Leucine
traction of smooth muscle	
spartame	b) Enkephaline
Vasopressine	d) Carnosine
All of the following are true about Phenylketonuria (PKU) except:	
Referred to as inborn errors of metabolism	b) A diet high in phenylalanine and high in tyrosine recommended.
The gene that converts phenylalanine to tyrosine is defective	d) Phenylalanine hydroxylase enzyme defective
Which of the following is a dipeptide?	
a) Carnosine	b) Glutathione
c) Vasopressine	d) Aspartame
71. Tertiary structure of a protein describes	
a) The order of amino acids	b) Location of disulphide bonds
c) Loop regions of proteins	d) The ways of protein folding
72. At isoelectric pH, an amino acid exists as	
a) Anion	b) Cation
c) Zwitterion	d) None of these
73. In protein structure the α -helix and β -pleated sheets are example of	
a) Primary structure	b) Secondary structure
c) Tertiary structure	d) Quaternary structure
74. An example of a saturated fatty acid is	
a) Palmitic acid	b) Oleic acid
c) Linoleic acid	d) Erucic acid
75. An example of unsaturated fatty acid is	
a) Myristic acid	b) Oleic acid
c) Stearic acid	d) Arachidic acid
76. A lipid containing alcoholic amine residue is	
a) Phosphatidic acid	b) Ganglioside
c) Glucocerebroside	d) Sphingomyelin
77. In mammals, the major fat in adipose tissues is	
a) Phospholipid	b) Cholesterol
c) Sphingolipids	d) Triacylglycerol
78. Glycosphingolipids are a combination of	
a) Ceramide with one or more sugar residues	b) Sphingosine with galactose
c) Glycerol with galactose	d) Sphingosine with phosphoric acid
79. The importance of phospholipids as constituent of cell membrane is because they possess	
a) Fatty acids	b) Glycerol