

QB365 Question Bank Software Study Materials

Biomolecules 50 Important 1 Marks Questions With Answers (Book Back and Creative)

12th Standard

Chemistry

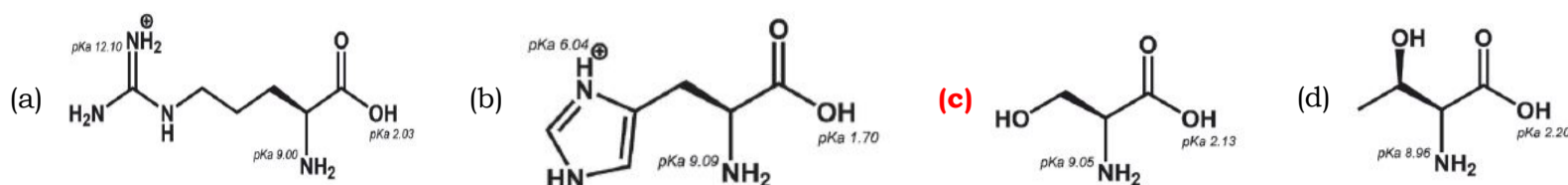
Total Marks : 50

Multiple Choice Question

50 x 1 = 50

- 1) Which one of the following rotates the plane polarized light towards left?
(a) D(+) Glucose (b) L(+) Glucose **(c) D(-) Fructose** (d) D(+) Galactose
- 2) The correct corresponding order of names of four aldoses with configuration given below Respectively is _____.
(a) L-Erythrose, L-Threose, L-Erythrose, D-Threose (b) D-Threose, D-Erythrose, L-Threose, L-Erythrose,
(c) L-Erythrose, L-Threose, D-Erythrose, D-Threose **(d) D-Erythrose, D-Threose, L-Erythrose, L-Threose**
- 3) Which one given below is a non-reducing sugar?
(a) Glucose **(b) Sucrose** (c) maltose (d) Lactose
- 4) $\text{Glucose} \xrightarrow{(\text{HCN})} \text{Product} \xrightarrow{(\text{hydrolysis})} \text{Product} \xrightarrow{(\text{HI} + \text{Heat})} \text{A}$, the compound A is _____.
(a) Heptanoic acid (b) 2-Iodohexane (c) Heptane (d) Heptanol
- 5) The central dogma of molecular genetics states that the genetic information flows from _____.
(a) Amino acids Protein DNA (b) DNA Carbohydrates Proteins **(c) DNA RNA Proteins** (d) DNA RNA Carbohydrates
- 6) In a protein, various amino acids linked together by _____.
(a) Peptide bond (b) Dative bond (c) α - Glycosidic bond (d) β - Glycosidic bond
- 7) Among the following the achiral amino acid is _____.
(a) 2-ethylalanine (b) 2-methylglycine **(c) 2-hydroxymethylserine** (d) Tryptophan
- 8) The correct statement regarding RNA and DNA respectively is _____.
(a) the sugar component in RNA is an arabinos and the sugar component in DNA is ribose
(b) the sugar component in RNA is 2'-deoxyribose and the sugar component in DNA is arabinose
(c) the sugar component in RNA is an arabinose and the sugar component in DNA is 2'-deoxyribose
(d) the sugar component in RNA is ribose and the sugar component in DNA is 2'-deoxyribose
- 9) In aqueous solution of amino acids mostly exists in _____.
(a) $\text{NH}_2\text{-CH(R)-COOH}$ (b) $\text{NH}_2\text{-CH(R)-COO}^-$ (c) $\text{H}_3\text{N}^+\text{-CH(R)-COOH}$ **(d) $\text{H}_3\text{N}^+\text{-CH(R)-COO}^-$**
- 10) Which one of the following is not produced by body?
(a) DNA (b) Enzymes (c) Hormones **(d) Vitamins**
- 11) The number of sp^2 and sp^3 hybridised carbon in fructose are respectively _____.
(a) 1 and 4 (b) 4 and 2 (c) 5 and 1 **(d) 1 and 5**
- 12) Vitamin B₂ is also known as _____.
(a) Riboflavin (b) Thiamine (c) Nicotinamide (d) Pyridoxine
- 13) The pyrimidine bases present in DNA are _____.
(a) Cytosine and Adenine (b) Cytosine and Guanine **(c) Cytosine and Thiamine** (d) Cytosine and Uracil

14) Among the following L- serine is _____.



15) The secondary structure of a protein refers to _____.

- (a) fixed configuration of the polypeptide backbone (b) hydrophobic interaction (c) sequence of α -amino acids
(d) α -helical backbone.

16) Which of the following vitamins is water soluble?

- (a) Vitamin E (b) Vitamin K (c) Vitamin A **(d) Vitamin B**

17) Complete hydrolysis of cellulose gives _____.

- (a) L-Glucose (b) D-Fructose (c) D-Ribose **(d) D-Glucose**

18) Which of the following statement is correct?

- (a) Ovalbumin is a simple food reserve in egg-white (b) Blood proteins thrombin and fibrinogen are involved in blood clotting
(c) Denaturation makes protein more active (d) Insulin maintains the sugar level of in the human body

19) Glucose is an aldose. Which one of the following reactions is not expected with glucose?

- (a) It does not form oxime **(b) It does not react with Grignard reagent** (c) It does not form osazones
(d) It does not reduce tollens reagent

20) If one strand of the DNA has the sequence 'ATGCTTGA', then the sequence of complementary strand would be _____.

- (a) TACGAACT** (b) TCCGAACT (c) TACGTACT (d) TACGRAGT

21) Insulin, a hormone chemically is _____.

- (a) Fat (b) Steroid **(c) Protein** (d) Carbohydrates

22) α -D (+) Glucose and β -D (+) glucose are _____.

- (a) Epimers **(b) Anomers** (c) Enantiomers (d) Conformational isomers

23) Which of the following are epimers?

- (a) D(+)-Glucose and D(+)-Galactose (b) D(+)-Glucose and D(+)-Mannose (c) Neither (a) nor (b) **(d) Both (a) and (b)**

24) Which of the following amino acids are achiral?

- (a) Alanine (b) Leucine (c) Proline **(d) Glycine**

25) Which is a monosaccharide among the following?

- (a) Sucrose (b) Cellulose (c) Maltose **(d) Glucose**

26) Sucrose on hydrolysis gives

- (a) maltose **(b) glucose and fructose** (c) 2 molecules of maltose (d) starch

27) The oxide bridges through which a large number of monosaccharide units are linked in polysaccharides are called

- (a) peptide bond (b) hydrogen bond (c) nitrogen bond **(d) glycosidic linkage**

28) Sucrose contains glucose and fructose linked by

- (a) C₁ - C₁ **(b) C₁ - C₂** (c) C₁ - C₄ (d) C₁ - C₆

29) Pyridoxine is_____

- (a) **vitamin B₆** (b) vitamin B₇ (c) vitamin B₉ (d) vitamin B₅
- 30) The number of asymmetric carbon atoms present in glucose is_____.
- (a) 3 (b) **4** (c) 5 (d) 6
- 31) Glucose reacts with hydroxylamine to give_____
- (a) **Glucose oxime** (b) Glucose cyanohydrin (c) Gluconic acid (d) saccharic acid
- 32) Honey is a mixture of_____
- (a) glucose and fructose (b) **glucose, fructose and sucrose** (c) glucose and galactose
(d) glucose, fructose and galactose
- 33) _____is an example of non-protein amino acid.
- (a) **Ornithine** (b) Glycine (c) Alanine (d) Lysine
- 34) A mixture of D (+) glucose and D (-) fructose is known as_____.
- (a) cane sugar (b) sweetless sugar (c) **invert sugar** (d) starch sugar
- 35) Disaccharides linked through the glycosidic carbon atoms of C₁ of glucose and C₂ of fructose are_____
- (a) **non-reducing** (b) reducing (c) both (a) and (b) (d) neither (a) nor (b)
- 36) The sugar unit present in nucleic acid is_____
- (a) a hexose (b) tetrose (c) **pentose** (d) glucose
- 37) The properties of protein are determined by_____
- (a) **nature of the amino acids** (b) the position of NH₂ group (c) the position of COOH group (d) all
- 38) An example for Ketotriose is
- (a) Glyceraldehyde (b) **Dihydroxy acetone** (c) Erythrose (d) Erythrulose
- 39) Erythrulose is a/an
- (a) Aldotetrose (b) Ketopentose (c) Ketotriose (d) **Ketotetrose**
- 40) The anomers of fructose is/are
- (a) α - D - Fructose (b) β -D- fructose (c) **both (a) & (b)** (d) none
- 41) Starch is a polymer of
- (a) **Glucose only** (b) Glucose and fructose (c) Glucose and galactose (d) Galactose only
- 42) One of the components of nucleic acid is
- (a) Glucose (b) Fructose (c) **Ribose** (d) Galactose
- 43) In an acidic pH, the α - amino acids have the charge
- (a) **+1** (b) 0 (c) -1 (d) -2
- 44) This amino acid produces a link in the helical structure and often called as a helix breaker due to its rigid cyclic structure
- (a) Lysine (b) Trypsine (c) Tyrosine (d) **Proline**
- 45) These are biological catalysts
- (a) **Enzymers** (b) Lipids (c) Carbohydrates (d) Vitamin
- 46) Phyloquinone is vitamin

(a) A (b) D (c) E **(d) K**

47) Sugar + Base ----- >

(a) Nucleoside (b) Nucleotide (c) Polynucleotide (d) None

48) Protein synthesis takes place at

(a) Mitochondria **(b) Ribosome** (c) Golgi bodies (d) Nucleolus

49) The major endocrine glands are

(a) Pituitary Pineal (b) Thymus, Thyroid (c) Adrenal, Pancreas **(d) All the above**

50) Which one of the following on reduction with Lithium Aluminium Hydride yields a secondary amine

(a) Nitro ethane

b) Methyl isocyanide

c) Acetamide

d) Methyl cyanide