

**B****DF-3032**

B. Sc. (Bioscience) (Sem. III) Examination
March / April – 2016
301 : Biochemistry

Time : 2 Hours]

[Total Marks : 50

Instructions :

(1)

નીચે દર્શાવેલ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી.
Fillup strictly the details of signs on your answer book.

Name of the Examination :
B. Sc. (BIOSCIENCE) (SEM. 3)

Name of the Subject :
301 : BIOCHEMISTRY

Subject Code No. : 3 0 3 2 Section No. (1, 2,.....) : Nil

Seat No. :

Student's Signature

- (2) There are total-50 multiple choice questions (MCQ) in question paper.
- (3) All questions are compulsory.
- (4) Select the best one from given options to give an answer.
- (5) Answer the questions only into the OMR answer-sheet which is given to you.

*O.M.R. Sheet ભરવા અંગેની અગત્યની સૂચનાઓ આપેલ
O.M.R. Sheetની પાછળ છાપેલ છે.
Important instructions to fillup O.M.R. Sheet
is given back side of provided O.M.R. Sheet.*

- 1 Which the following is the word regarding steroids is not correct ?
- (A) Ergosterol
 - (B) Cortisone
 - (C) Progesterone
 - (D) Glycolipid
- 2 Which of the following statement regarding to properties of starch is not correct ?
- (A) Not sweet.
 - (B) Present of amylose and amylopectin chains.
 - (C) Stored food in plants.
 - (D) Soluble in water.
- 3 Which one of the following pairs is not correctly matched ?
- (A) Triose sugar-Dihydroxy acetone -Keto sugar.
 - (B) Triose sugar-Glyceraldehydes-Aldo sugar.
 - (C) Pentose sugar-Ribulose-Keto sugar.
 - (D) Hexose sugar-Fructose -Aldo sugar.
- 4 Which the following pair regarding to biological importance of carbohydrates is not correctly matched ?
- (A) Glucose-The most widely used in respiration.
 - (B) Cellulose-Forms the plant cell wall.
 - (C) Glycogen -Reserve food in animals.
 - (D) Ribose sugar-Structural components of ATP.
- 5 Which the following regarding to examples of Keto sugar is not correctly?
- (A) Dihydroxy acetone
 - (B) Fructose
 - (C) Ribulose
 - (D) Ribose sugar

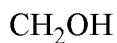
- 6 Which of the following pairs is not correctly matched ?
- (A) Cortisone – Present of –COOH or keto group
 - (B) Butter – Glycerol + 3 Fatty acids.
 - (C) Glycolipid – Glycerol + Lipid.
 - (D) Waxes – Monohydroxy alcohol + 1 Fatty acid.
- 7 Which of the following option is not correctly for glucose molecule ?
- (A) Found in the juice of fruits.
 - (B) It is Keto hexoses sugar.
 - (C) Hydrolysis of a molecule of maltose
 - (D) It can pass through the cell membrane
- 8 Which one of the following pairs is not correctly matched ?
- (A) Ribose – Deoxyribose.
 - (B) Galactose – Lactose
 - (C) Fructose – Glucose
 - (D) Fructose – Galactose
- 9 Which one of the following pairs is not correctly matched ?
- (A) Cortisone – sterols.
 - (B) Triose sugar – DHAP.
 - (C) Starch – amylase and amylopectin.
 - (D) Phospholipid – plasma membrane.
- 10 Which one of the following pairs is correctly matched ?
- (A) Glycogen -Forms the plant cell wall.
 - (B) Fats -Long saturated Fatty acids chain.
 - (C) Derivatives of Lipid -Vitamins A, D, E.
 - (D) Deoxyribose -RNA.

- 11 Lipids are relatively insoluble in....
- Ether
 - Chloroform
 - Water
 - Benzene
- 12 Which of the following statement regarding the Fatty acid is not correct?
- Crotonic acid and oleic acid are Unsaturated fatty acids.
 - Unsaturated fatty acids are two successive carbon atoms at certain places therein are linked by a double bond.
 - Saturated fatty acids are capable of accepting hydrogen or halogen atoms.
 - Butyric acid and palmitic acids are Saturated fatty acids
- 13 Which of the following statement regarding to Lipid is not correct ?
- Lipids are formed of C, H and O atoms, The number of H atom is less than that of O.
 - Lipids are of three types i Simple ii Complex iii Steroids
 - The lipids are a heterogenous group of compounds related to Fatty acids.
 - Lipids are the important constituents of the diet because of their high energy value.
- 14 Which of the following statement regarding to Amylase is not correct ?
- None of these
 - Unbranched polysaccharide chains made up of glucose units.
 - Amylase occur in the constitution of glycogen.
 - Amylase occur in more amount in starch.
- 15 Which of the following options suggest number of carbons in descending order ?
- | | |
|------------|-----------------|
| P Fructose | Q Palmitic acid |
| R Ribulose | S Oleic acid. |
- S -P - Q -R
 - R- Q - P - S
 - R-P- Q - S
 - S - Q - P-R
- 16 In the formation of triglyceride, glycerol get linked with any Fatty acids by..
- $>C=O$
 - $-NH_2$
 - $-COOH$
 - $-CHO$

17 Which of the following is an aldose sugar ?

- (A) None of these
- (B) Glucose
- (C) Galactose
- (D) both Glucose and Galactose

18 Which of the following structure show the types of sugar ?



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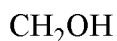
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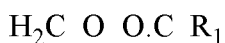


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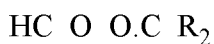


- (A) Keto pentose sugar
- (B) Aldo triose sugar
- (C) Aldo pentose sugar
- (D) Keto triose sugar

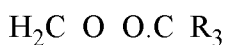
19 Which molecules are the consist of a following molecule structure ?



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- (A) glycerol + fatty acid
- (B) 3 glycerol + 1 fatty acid
- (C) 1 glycerol + 3 fatty acid
- (D) 3 glycerol + 3 fatty acid

20 Which of the following the general formula of Carbohydrate ?

- (A) None of these
- (B) $\text{C}_n(\text{H}_2\text{O})_m$
- (C) $\text{C}_n(\text{H}_2\text{O})_{n-1}$
- (D) $(\text{C}_6\text{H}_{10}\text{O}_5)_n$

- 21 The general formula of monosaccharides is
 (A) $C_nH_{2n}O_{2n}$
 (B) $C_nH_{2n}O_n$
 (C) $C_{2n}H_2O_n$
 (D) $C_nH_2O_{2n}$
- 22 The aldose sugar is
 (A) Dihydroxyacetone
 (B) Glycerose
 (C) Ribulose
 (D) Erythrulose
- 23 Polysaccharides are
 (A) Oils
 (B) Polymers
 (C) Acids
 (D) Proteins
- 24 Which of the following is a non-reducing sugar ?
 (A) Trehalose
 (B) Isomaltose
 (C) Maltose
 (D) Lactose
- 25 Mutarotation refers to change in
 (A) Chemical properties
 (B) pH
 (C) Optical rotation
 (D) Conductance
- 26 The sugar found in milk is
 (A) Lactose
 (B) Galactose
 (C) Glucose
 (D) Fructose
- 27 Sucrose consists of
 (A) Glucose + mannose
 (B) Glucose + glucose
 (C) Glucose + fructose
 (D) Glucose + galactose
- 28 A positive Benedict's test is not given by
 (A) Glucose
 (B) Sucrose
 (C) Lactose
 (D) Maltose
- 29 Osazones are not formed with the
 (A) Lactose
 (B) Glucose
 (C) Fructose
 (D) Sucrose
- 30 A carbohydrate, commonly known as dextrose is
 (A) Glycogen (B) Dextrin
 (C) D-Fructose (D) D-Glucose

- 31 Which of the following is an epimeric pair ?
 (A) Lactose and maltose
 (B) Glucose and fructose
 (C) Glucose and galactose
 (D) Galactose and mannose
- 32 Mucopolysaccharides are
 (A) Amino acids
 (B) Homopolysaccharides
 (C) Heteropolysaccharides
 (D) Proteins
- 33 All proteins contain the
 (A) Only a few amino acids
 (B) Same 20 amino acids
 (C) Different amino acids
 (D) 300 Amino acids occurring in nature
- 34 Sulphur containing amino acid is
 (A) Asparagine
 (B) Methionine
 (C) Leucine
 (D) Valine
- 35 Mother of a mal nourished child has been instructed to include a complete protein in diet for her child, which out of the followings proteins should be recommended?
 (A) Milk (B) Pulses
 (C) Wheat (D) Soy Protein
- 36 Which out of the followings is not a fibrous protein ?
 (A) Keratin
 (B) Carbonic anhydrase
 (C) Collagen
 (D) Fibrinogen
- 37 Which of the following is not an aromatic amino acid ?
 (A) Tyrosine
 (B) Serine
 (C) Phenylalanine
 (D) Tryptophan
- 38 Which of the following amino acid is polar ?
 (A) Isoleucine (B) Valine
 (C) Histidine (D) Leucine
- 39 Which of the following is not a type of protein secondary structure ?
 (A) Turns
 (B) β -pleated sheet
 (C) α -helix
 (D) Third level folding to form small globules
- 40 α -helix has
 (A) 3.0 amino acid residues/turn
 (B) 3.4 amino acid residues/turn
 (C) 3.6 amino acid residues/turn
 (D) 3.8 amino acid residues/turn

- 41 Tertiary structure is maintained by
 (A) All of these
 (B) Peptide bond
 (C) Hydrogen bond
 (D) Di-sulphide bond
- 42 Denaturation of proteins results in
 (A) Irreversible changes in the molecule
 (B) Disruption of primary structure
 (C) Breakdown of peptide bonds
 (D) Destruction of hydrogen bonds
- 43 Which of the following is not an amino acid ?
 (A) Palmitic acid
 (B) Glutamic acid
 (C) Aspartic acid
 (D) Glutamine
- 44 At neutral pH, a mixture of amino acids in solution would be predominantly:
 (A) Hydrophobic
 (B) Dipolar ions
 (C) Nonpolar molecules
 (D) Positive and monovalent
- 45 An aromatic amino acid is
 (A) Arginine (B) Lysine
 (C) Tyrosine (D) Taurine
- 46 Non essential amino acids
 (A) May be synthesized in the body in diseased states
 (B) Are not components of tissue proteins
 (C) May be synthesized in the body from essential amino acids
 (D) Have no role in the metabolism
- 47 An example of scleroprotein is
 (A) Ovoglobulin
 (B) Zein
 (C) Keratin
 (D) Glutenin
- 48 Proteins are soluble in
 (A) Benzene
 (B) Anhydrous acetone
 (C) Aqueous alcohol
 (D) Anhydrous alcohol
- 49 Tertiary structure of a protein describes
 (A) The ways of protein folding
 (B) The order of amino acids
 (C) Location of disulphide bonds
 (D) Loop regions of proteins
- 50 Protein + prosthetic group = _____.
 (A) Fibrous protein
 (B) Simple protein
 (C) Conjugated protein
 (D) Globular protein