

**Q.57 What is the role of vitamin D in body?**

**Ans.** Vitamin D has a role in the absorption of calcium which is essential for the maintenance of healthy bones.

**Q.58 Write uses of amylases enzyme.**

**Ans.** Amylase enzymes are used in bread making because they can yield more starch of the flour. Even they are efficient enough to convert starch to sweet glucose syrup. This can be used as sweetener in the food as well as bread making.

**Q.59 Write uses of lactase enzyme**

**Ans.** Lactase enzyme is used to increase sweetness in ice cream. Lactase enzyme metabolizes the lactase sugar in the body. As lactose in milk is broken down to galactose and glucose. Which are sweeter than lactose.

**Q.60 What is meant by denaturing of proteins?**

**Ans.** Denaturing of protein means precipitation or coagulation of protein. It can be carried out by heating or changing pH. A simple common method for denaturing of protein is boiling of an egg. White viscous fluid (albumen) present in an egg is protein. When egg is boiled for a few minutes, albumen coagulates i.e., solidifies.

**Q.61 What are macromolecules?**

**Ans.** Macromolecules are the bigger molecules which are formed by smaller molecules. Macromolecules are synthesized by living organisms from simple molecules present in the environment. Macromolecules are essential for us as they are reservoirs of energy.

## **Multiple Choice Questions**

**1. Carbohydrates are synthesized by plants through photosynthesis process which requires the following except:**

- (a) CO<sub>2</sub> and water
- (b) Sunlight
- (c) O<sub>2</sub>
- (d) Chlorophyll

**2. Which of the followings is a disaccharide?**

- (a) Glucose
- (b) Fructose
- (c) Sucrose
- (d) Starch

**3. Photosynthesis process produces**

- (a) starch
- (b) cellulose
- (c) sucrose
- (d) glucose

**4. Which of the following is tasteless?**

- (a) starch            (b) glucose  
(c) fructose        (d) sucrose

**5. When glucose and fructose combine they produce**

- (a) starch            (b) cellulose  
(c) sucrose          (d) none of these

**6. Glucose is:**

- (a) hexahydroxy aldehyde  
(b) hexahydroxy ketone  
(c) pentahydroxy aldehyde  
(d) pentahydroxy ketone

**7. Thousands of amino acids polymerize to form**

- (a) carbohydrates    (b) proteins  
(c) lipids            (d) vitamins

**8. Which of the followings is a triglyceride?**

- (a) carbohydrates    (b) proteins  
(c) lipids            (d) vitamins

**9. Enzymes are proteins which have the following properties except:**

- (a) they catalyze reaction  
(b) they are highly non-specific  
(c) they are highly efficient  
(d) they are produced by living cells

**10. Which one of the following vitamins is water soluble?**

- (a) vitamin A        (b) vitamin C  
(c) vitamin D        (d) vitamin E

**11. Which one of the following is a fat soluble vitamin?**

- (a) A                (b) E  
(c) K                (d) All of these

**12. Which one of the following is not the characteristics of monosaccharide?**

- (a) White crystalline solids  
(b) Soluble in water

- (c) Hydrolysable  
(d) reducing in nature

**13. Which one of the following statements about glucose and sucrose is incorrect?**

- (a) Soluble in water  
(b) Naturally occurring  
(c) Carbohydrates  
(d) Disaccharides

**14. Which one of the following is a reducing sugar?**

- (a) glucose            (b) fructose  
(c) sucrose            (d) starch

**15. The most important oligosaccharide is:**

- (a) sucrose            (b) glucose  
(c) fructose            (d) maltose

**16. Night blindness is because of deficiency of:**

- (a) vitamin A        (b) protein  
(c) vitamin C        (d) vitamin D

**17. The organic compound used as drugs to control bleeding are**

- (a) vitamins            (b) proteins  
(c) Lipids            (d) glycerides

**18. Deficiency of Vitamin E causes**

- (a) rickets.            (b) scurvy.  
(c) anemia in babies.  
(d) night blindness

**19. Lipids are macromolecules. They have characteristics except one of the following:**

- (a) they are high energy foods  
(b) they are soluble in water  
(c) they are poor conductor of heat.  
(d) they are esters of fatty acids.

**20. vitamins are accessory Growth factors they play important role in our body like;**

- (a) provide energy to the body.
- (b) insulate our body from electric shock
- (c) build brain cells
- (d) regulate metabolism

**21. General formula of carbohydrate is**

- (a)  $C_n(H_2O)_n$       (b) CH
- (c)  $C_nH_{2n}$       (d)  $C_nH_{2n}O$

**22. Carbohydrates are synthesized by plants through**

- (a) Respiration      (b) Photosynthesis
- (c) Dehydration      (d) Evaporation

**23. Which one of the following cannot be hydrolyzed?**

- (a) Polysaccharides
- (b) Monosaccharides
- (c) Oligosaccharides
- (d) All of these

**24. Glucose and fructose are**

- (a) Pentose      (b) Triose
- (c) Hexoses      (d) None of these

**25. Fructose contain group**

- (a) ketone      (b) Aldehyde
- (c) Alcoholic      (d) Alkyl

**26. Monosaccharides are crystalline solids**

- (a) Grey      (b) Crimson
- (c) Silver      (d) White

**27. Which is not a reducing sugar?**

- (a) Glucose      (b) Fructose
- (c) Cellulose      (d) All of them

**28. Tetrasaccharides are classified under**

- (a) Monosaccharides

- (b) Oligosaccharides
- (c) Polysaccharides
- (d) All of them

**29. The most important disaccharide is**

- (a) Sucrose      (b) Glucose
- (c) Cellulose      (d) None of them

**30. Which one of the following are amorphous solids?**

- (a) Monosaccharides
- (b) Oligosaccharides
- (c) Polysaccharides
- (d) All of them

**31. On hydrolysis sucrose produces one unit of glucose and one unit of**

- (a) Fructose      (b) starch
- (c) Cellulose      (d) None of them

**32. The source of galactose**

- (a) Fruits      (b) Vegetables
- (c) Cereals      (d) All of them

**33. Which is the essential sugar found in milk?**

- (a) Maltose      (b) Lactose
- (c) Galactose      (d) Starch

**34. Maltose is commonly found in**

- (a) Cereals      (b) Milk
- (c) Cotton      (d) Honey

**35. Starch is commonly found in**

- (a) Wheat      (b) Rice
- (c) Maize      (d) All of them

**36. Human body uses carbohydrates in the form of**

- (a) Glucose      (b) Maltose
- (c) Fructose      (d) Galactose

**37. Which carbohydrate is used directly by muscles for energy?**

- (a) Galactose      (b) Lactose

- (c) Glucose (d) Fructose
38. Low sugar level in human body results in  
(a) Hyperglycemia (b) Hypoglycemia  
(c) Anemia (d) All of them
39. Which helps to keep the bowel functioning properly?  
(a) Dietary fiber (b) Vitamins  
(c) Lipids (d) Carbohydrates
40. Which helps in lowering of cholesterol level?  
(a) vitamins (b) Fiber  
(c) Carbohydrates (d) All of them
41. The energy provided by carbohydrates in per gram  
(a) 17 KJ (b) 21 KJ  
(c) 35 KJ (d) 10 KJ
42. Which is the natural sugar found in starchy foods?  
(a) Pentose (b) Dextrose  
(c) Hexose (d) All of them
43. 50% dextrose contains approximate amount of energy.  
(a) 250 calories (b) 16 calories  
(c) 170 calories (d) 120 calories
44. Amino acids are the building blocks of  
(a) Proteins (b) Carbohydrates  
(c) vitamins (d) fats
45. The percentage of protein in dry weight of cell  
(a) 20% (b) 40%  
(c) 50% (d) 70%
46. Protein is not found in  
(a) Muscles (b) Skin  
(c) Cotton (d) Hair
47. Chemical formula of amino group is

- (a)  $\text{NH}_3$  (b)  $\text{NH}_2$   
(c)  $\text{NH}_4^+$  (d)  $\text{COOH}$
48. Out of twenty how many amino acids can be synthesized by human body?  
(a) Five (b) Ten  
(c) Seven (d) Twelve
49. A bond formed between two amino acids is  
(a) Peptide linkage (b) Covalent bond  
(c) Hydrogen bond  
(d) Glycosidic linkage
50. The nature of enzyme is  
(a) Vitamin (b) Protein  
(c) Carbohydrate (d) fats
51. When bones are heated they give  
(a) Starch (b) Gelatin  
(c) fats (d) Oils
52. Lipids are macromolecules made up of  
(a) Fatty acids (b) amino acids  
(c) nucleotides (d) none of them
53. Oils and fats are esters of large chain fatty acids with  
(a) Glycogen (b) Glucose  
(c) Starch (d) Glycerol
54. Triglycerides are fatty acids  
(a) Unsaturated (b) Saturated  
(c) Both of them (d) None of them
55. Chemical formula of Stearic acid  
(a)  $\text{C}_{15}\text{H}_{31}\text{COOH}$   
(b)  $\text{C}_{17}\text{H}_{35}\text{COOH}$   
(c)  $\text{C}_{17}\text{H}_{37}\text{COOH}$   
(d) None of them
56. In hydrogenation of vegetable oil catalyst employed is  
(a) Ni (b) Pt

- (c) ZnO                      (d) Cr<sub>2</sub>O<sub>3</sub>
- 57. Margarine is produced by adding hydrogen to vegetable oil at**  
(a) 2000<sup>0</sup>C                      (b) 100<sup>0</sup>C  
(c) 200<sup>0</sup>C                      (d) 1000<sup>0</sup>C
- 58. Rancid butter has**  
(a) Foul smell                      (b) Rotten egg smell  
(c) Pungent smell (d) No smell
- 59. Smell of rancid butter is due to the presence of**  
(a) Propanoic acid                      (b) butanoic acid  
(c) acetic acid                      (d) citric acid
- 60. Methyl butanoate smell like**  
(a) Apple                      (b) mango  
(c) Lemon                      (d) Grapes
- 61. Ethyl butanoate smells like**  
(a) Apple                      (b) Lemon  
(c) Pine apple                      (d) Melon
- 62. Nucleic acids are made up of long chain of**  
(a) Nucleotide                      (b) fatty acids  
(c) Amino acid                      (d) none of them
- 63. DNA was discovered by**  
(a) J. Watson                      (b) Funk  
(c) Robert Brown                      (d) Hopkins
- 64. RNA consists of**  
(a) Ribose                      (b) Pentose  
(c) Hexose                      (d) Trioses
- 65. Synthesis of protein is directed by**  
(a) DNA                      (b) RNA  
(c) Both of them                      (d) None of them
- 66. Vitamin B<sub>1</sub> was discovered by**  
(a) Funk                      (b) Hopkins  
(c) Crick                      (d) Watson
- 67. The accumulation of which vitamin causes bone-like deposits in the kidney**  
(a) Vitamin D                      (b) Vitamin E  
(c) Vitamin B                      (d) Vitamin A
- 68. Eggs oils and fats contain vitamin**  
(a) A                      (b) B  
(c) E                      (d) D
- 69. Which is a hereditary material?**  
(a) DNA                      (b) RNA  
(c) Protein                      (d) All of them
- 70. Denaturing of protein is caused by**  
(a) Heating                      (b) changing pH  
(c) Both of them                      (d) None of them
- 71. White viscous fluid (albumen) present in an egg is**  
(a) Protein                      (b) Fats  
(c) Vitamins                      (d) Carbohydrates

