

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) CO₂ and water
- (b) Sunlight
- (c) O₂
- (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) NH_3 (b) NH_2
 (c) NH_4^+ (d) 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) Cr₂O₃

57. Margarine is produced by adding hydrogen to vegetable oil at

- (a) 2000°C (b) 100°C
(c) 200°C (d) 1000°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 B₁ 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

Answer Key

1	c	2	c	3	d	4	a	5	c
6	a	7	b	8	c	9	b	10	b
11	d	12	c	13	d	14	a	15	a
16	a	17	b	18	c	19	b	20	d
21	a	22	b	23	b	24	c	25	a
26	d	27	c	28	b	29	a	30	c
31	a	32	d	33	b	34	a	35	d
36	a	37	c	38	b	39	a	40	b
41	a	42	b	43	c	44	a	45	c
46	c	47	b	48	b	49	a	50	b
51	b	52	a	53	d	54	a	55	b
56	a	57	c	58	a	59	b	60	a
61	c	62	a	63	a	64	a	65	b
66	a	67	a	68	a	69	a	70	c
71	a								