# 11th 12th Science Notes Questions

## [Tnpsc Syllabus Portion]

#### Bio molecules

- 1. The basic unit of organism, which is the smallest unit of life is
  - a) Cells
  - b) Tissues
  - c) Organs
  - d) All the above

#### **Explanation**

A living organism is a collection of organic molecules which interact with each other and with their environment in a very unique way. All living organisms are made of one or more cells which are considered as the smallest units of life.

- 2. Which of the following is/are the compounds found in cell?
  - a) Carbon
  - b) Hydrogen
  - c) Oxygen
  - d) All the above

#### **Explanation**

Cells are essentially packets of chemicals necessary for life. The compounds present in cells are composed of carbon, hydrogen, oxygen, nitrogen, phosphorus and sulphur.

- 3. All the carbon compounds found in our living cells can be placed under which of the following?
  - a) Carbohydrates
  - b) Amino acids and proteins
  - c) Nucleic acids and lipids
  - d) All the above

## **Explanation**

Nearly all the carbon compounds found in living cells can be placed into one or another of the following four classes. Carbohydrates ,Amino acids , proteins , Nucleic acids and Lipids.

- 4. Carbohydrates are
  - a) Polyhydroxy aldehydes
  - b) Polyhydroxy ketones
  - c) Both a and b
  - d) None of the above

# **Explanation**

Carbohydrates are polyhydroxy aldehydes or polyhydroxy ketones.

- 5. The following type of carbohydrate cannot be hydrolysed into simpler sugar
  - a) Monsaccharides
  - b) Polyhydroxy aldehydes
  - c) Polyhydroxy ketones
  - d) All the above

The monosaccharides are polyhydroxy aldehydes www.tntextbooks.in 372 or polyhydroxy ketones which cannot be hydrolysed into simpler sugars.

- 6. The monosaccharides group gets classified into
  - a) Aldoses
  - b) Ketoses
  - c) Alkaholes
  - d) Both a anb b

# **Explanation**

(a) Aldoses, which contain an aldehyde group

(b) Ketoses, which contain a keto group

- 7. The aldoses and ketoses are divided into
  - a) Trioses
  - b) Tetroses
  - c) Pentoses
  - d) All the above

## Explanation

The aldoses and ketoses are further divided into sub-groups on the basis of the number of carbon atoms in their molecules, as trioses, tetroses, pentoses, hexoses etc. Thus monosaccharides are generally referred to as aldotrioses, aldotetroses, aldopentoses, aldohexoses, ketohexoses etc.

- 8. Which of the following yield 2 to 10 molecules on hydrolysis?
  - a) Oligo saccharides
  - b) Monosaccharides
  - c) Both a and b
  - d) None of the above

# Explanation

Oligosaccharides are sugars that yield two to ten monosaccharide molecules on hydrolysis and are thus again classified into various groups depending upon the number of monosaccharide units formed on hydrolysis.

- 9. The disaccharides are sugars which on hydrolysis give two molecules of the \_\_\_\_\_ monosaccharides.
  - a) Same
  - b) Different
  - c) A or B
  - d) None of the above

### **Explanation**

Disaccharides: The disaccharides are sugars which on hydrolysis give two molecules of the same or different monosaccharides.

- 10. Oligosaccharides divides into
  - a) Disaccharides
  - b) Trisaccharides
  - c) Both a and b
  - d) None of the above

## **Explanation**

Disaccharides: The disaccharides are sugars which on hydrolysis give two molecules of the same or different monosaccharides.

Trisaccharides: These give three molecules of monosaccharides on hydrolysis.

- 11. Non sugar or polysaccharides in which large number of monosaccharide are linked to each other by
  - a) Nuclear force
  - b) Electrostatic attraction
  - c) Oxide bridges
  - d) None of the above

## **Explanation**

These are carbohydrates which involve a large number of monosaccharide units linked to each other by oxide bridges. These linkages are called glycosidic linkages.

- 12. The general formula of polysaccharides is
  - a) (C6 H10 O5) n
  - b) (C6 H10 O5) n
  - c) (C6 H10 O5) n

d) None of the above

#### **Explanation**

The common and widely distributed polysaccharides correspond to the general formula (C6H10O5) n. They get hydrolysed to give monosaccharides.

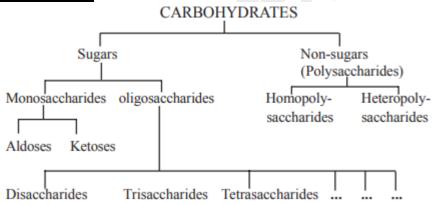
- 13. Find out the polysaccharides from the following
  - a) Starch
  - b) Cellulose
  - c) Inulin
  - d) All the above

#### **Explanation**

Thus chemically, polysaccharides are long chain polymers of monosaccharides. Starch, Cellulose and inulin are examples of polysaccharides.

- 14. Which of the following includes the classification of non sugars or polysaccharides
  - a) Homopolysaccharides
  - b) Heteropolysaccharides
  - c) Both a and b
  - d) None of the above

#### **Explanation**



- 15. Glucose is also known as
  - a) Dextrose
  - b) Grape sugar
  - c) Fruit sugar
  - d) Only a and b

## **Explanation**

Glucose is a monosaccharide and belongs to aldohexose. Glucose is known as dextrose because it occurs in nature as the optically active dextro-rotatory isomer. It is also called grape sugar as it is found in most sweet fruits especially grapes.

- 16. Glucose is found naturally in
  - a) Grapes
  - b) Honey
  - c) Mango
  - d) Only a and b

Glucose is also called grape sugar as it is found in most sweet fruits especially grapes. It is present in honey also.

- 17. Glucose occurs in nature as
  - a) Optically active dextro-rotatory isomer
  - b) Optically inactive dextro-rotatory isomer
  - c) Optically active dextro-rotatory, monomer
  - d) Optically active dextro-rotatory polimer

### **Explanation**

Glucose is known as dextrose because it occurs in nature as the optically active dextro-rotatory isomer.

- 18. Glucose is prepared in laboratory by acid hydrolysis of cane sugar in presence of
  - a) Alcohol
  - b) Acid
  - c) Aldehyde
  - d) Ketones

# **Explanation**

Glucose is prepared in laboratory by acid hydrolysis of cane sugar in presence of Alcohol.

- 19. Which of the following analysis shows that molecular formula of glucose is C6 H12 O6?
  - a) Elemental analysis
  - b) Molecular weight determination
  - c) Both a and b
  - d) None of the above

# **Explanation**

Elemental analysis and molecular weight determination show that the molecular formula of glucose is C6H12O6.

- 20. Complete reduction of glucose with concentrated hydriodic acid in the presence of red phosphorous produces
  - a) **N- hexane**
  - b) N- pentane
  - c) Both a and b
  - d) None of the above

Complete reduction of glucose with concentrated hydriodic acid in the presence of red phosphorous produces n-hexane as the major product. This indicates that the six carbon atoms in the glucose molecule form an unbranched chain of six carbon atoms.

- 21. In which of the following glucose readily dissolves to form neutral solution?
  - a) Water
  - b) Acid
  - c) Base
  - d) Both b and c

#### **Explanation**

Glucose readily dissolves in water to give a neutral solution. This indicates that the glucose molecule does not contain a carboxyl group.

- 22. Mild oxidation of glucose with bromine water gives gluconic acid. This indicates the presence of
  - a) Ketone group
  - b) Aldehyde group
  - c) Alcohol group
  - d) Both a and c

## **Explanation**

Mild oxidation of glucose with bromine water gives gluconic acid. This indicates the presence of an aldehyde group since only the aldehyde group can be oxidised to an acid, containing same number of carbon atoms.

- 23. Oxidation of gluconic acid with nitric acid gives
  - a) Saccharic acid
  - b) Acetic acid
  - c) Vinegar
  - d) None of the above

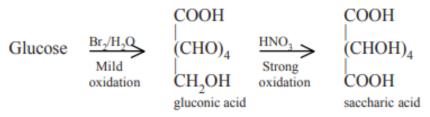
# **Explanation**

Further oxidation of gluconic acid with nitric acid gives saccharic acid.

24. While oxidation of gluconic acid with nitric acid it gives saccharic acid this indicates the presence of

- a) Primary alcoholic group
- b) Secondary alcoholic group
- c) Primary aldehyde group
- d) None of the above

Further oxidation of gluconic acid with nitric acid gives saccharic acid. This indicates the presence of a primary alcoholic group.



- 25. Which chemical mixture is known as Tollen's reagent?
  - a) Ammonium nitrate
  - b) Silver nitrate
  - c) Potassium nitrate
  - d) All the above

### **Explanation**

Chemical mixture of ammoniacal solution of silver nitrate is known as Tollen's reagent.

- 26. What is fehling's solution
  - a) Basic solution of cupric ion
  - b) Acidic solution of cupric ion
  - c) Basic solution of nitrate ion
  - d) None of the above

# **Explanation**

A basic solution of cupric ion is known as Fehling's solution.

- 27. Glucose and fructose reduces an ammoniacal solution of silver nitrate (Tollen's reagent) to metallic silver or a basic solution of cupric ion (Fehling's solution) to red cuprous oxide. These reactions further confirm the presence of a \_\_\_\_\_.
  - a) Ketone group
  - b) Aldehyde group
  - c) Acids
  - d) Base

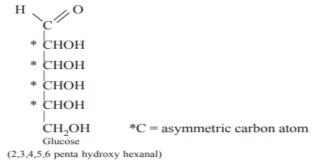
## **Explanation**

Glucose and fructose reduces an ammoniacal solution of silver nitrate (Tollen's reagent) to metallic silver or a basic solution of cupric ion (Fehling's solution) to red cuprous oxide. These reactions further confirm the presence of a aldehyde group.

- 28. Glucose and fructose reacts with acetic anhydride in the presence of pyridine to form a
  - a) Penta acetate
  - b) Hexa acetate
  - c) Tetra acetate
  - d) All the above

### **Explanation**

Glucose and fructose reacts with acetic anhydride in the presence of pyridine to form a penta acetate. This reaction indicates the presence of five hydroxyl groups in a glucose molecule.



- 29. Glucose and fructose on reaction with the followings shows the presence of aldehyde or ketone group
  - a) Hydroxylamine
  - b) HCN
  - c) Both a and b
  - d) None of the above

# **Explanation**

Glucose and fructose reacts with hydroxylamine to form a monoxime or adds only one mole of HCN to give a cyanohydrin. This reaction indicates the presence of either an aldehyde or a ketone.

- 30. What is called as fruit sugar?
  - a) Sucrose
  - b) Fructose
  - c) Glucose
  - d) Ducrose

# **Explanation**

Fructose is present in abundance in fruits and hence it is called as fruit sugar.

- 31. In which of following fructose is found in combined or separate form
  - a) Cane sugar
  - b) Honey
  - c) Fruits
  - d) All the above

Fructose is present in abundance in fruits and hence it is called as fruit sugar. It is also present in cane sugar and honey alongwith glucose in combined form.

- 32. What is/are the other names of fructose
  - a) Laevulose
  - b) Ketohexose
  - c) Both a and b
  - d) None of the above

### **Explanation**

Since naturally occurring fructose is laevorotatory, it is also known as laevolose. It is a ketohexose.

- 33. Fructose is obtained by hydrolysis, of cane sugar with \_\_\_\_\_, along with glucose.
  - a) Hydrochloric acid
  - b) Sulphuric acid
  - c) Nitric acid
  - d) Hypochlorous acid

## **Explanation**

Fructose is obtained by hydrolysis, of cane sugar with sulphuric acid, along with glucose.

- 34. What is D+ and D
  - a) Glucose and fructose
  - b) Fructose and glucose
  - c) Glucose and sucrose
  - d) Sucrose and fructose

#### **Explanation**

D (+) glucose and D (-) fructose.

- 35. The solution having equal molecules of D (+) glucose and D (-) fructose is termed as
  - a) Invert solution
  - b) Double solution
  - c) Invertose
  - d) Both a and b

# **Explanation**

**Learning Leads To Ruling** 

The solution having equal molecules of D (+) glucose and D (-) fructose is termed as invert sugar and the process is known as inversion of sucrose.

- 36. The molecular formula of fructose is same as that of
  - a) Glucose
  - b) Sucrose
  - c) Maltose
  - d) Both a and b

#### **Explanation**

Glucose – C<sub>6</sub> H<sub>12</sub> O<sub>6</sub>

Fructose – C<sub>6</sub> H<sub>12</sub> O<sub>6</sub>

- 37. Which of the following analysis shows the molecular formula of fructose?
  - a) Elemental analysis
  - b) Molecular weight determination
  - c) Both a and b
  - d) None of the above

### **Explanation**

Elemental analysis and molecular weight determination show that the molecular formula of fructose is C<sub>6</sub>H<sub>12</sub>O<sub>6</sub>.

- 38. Which of the following is sweet tasting, crystalline, water-soluble substances, easily hydrolysed by enzymes?
  - a) Monosaccharide
  - b) Polysaccharide
  - c) Disaccharide
  - d) All the above

## **Explanation**

Disaccharides are sweet tasting, crystalline, water-soluble substances, easily hydrolysed by enzymes and dilute mineral acids to two monosaccharide units.

- 39. In disaccharide, each monosaccharide is connected with the other by means of
  - a) Glycosidic linkage
  - b) Secure linkage
  - c) Both a and b
  - d) None of the above

# **Explanation**

The hydrolysis involves a cleavage of glycosidic linkage (i.e.,) in the formation of disaccharide molecule atleast one monosaccharide unit is linked to the other through the carbonyl carbon (C1 in glucose and C2 in fructose).

- 40. Disaccharides linked through the glycosidic carbon atoms of each component (C1 of glucose to C2 of fructose) are \_\_\_\_\_\_disaccharides.
  - a) Reducing saccharide
  - b) Non reducing saccharide
  - c) Converting sacccharide
  - d) Both a and c

Disaccharides linked through the glycosidic carbon atoms of each component (C1 of glucose to C2 of fructose) are non-reducing disaccharides. (e.g.,) Sucrose

- 41. Disaccharides linked through C1 of the first to C4 or C6 of the second component are
  - a) Reducing saccharide
  - b) Non reducing saccharide
  - c) Converting saccharide
  - d) All the above

#### **Explanation**

Disaccharides linked through C1 of the first to C4 or C6 of the second component. (Reducing disaccharides) (e.g.,) Lactose.

- 42. The most important source of Sucrose is
  - a) Sugar beets
  - b) Sugar cane
  - c) Both a and b
  - d) None of the above

## **Explanation**

Sucrose is the commonest sugar known. The most important sources are sugar cane and sugar beets.

- 43. Which of the following is colourless, odourless crystalline compound
  - a) Fructose
  - b) Sucrose
  - c) Glucose
  - d) Both a and b

# **Explanation**

It is a colourless, odourless crystalline compound. It is soluble in water. It is dextrorotatory.

- 44. The following is a non reducing sugar.
  - a) Glucose
  - b) Fructose
  - c) Sucrose

d) None of the above

#### **Explanation**

Sucrose is a colourless, odourless crystalline compound. It is soluble in water. It is dextrorotatory. It is a non-reducing sugar.

- 45. Sucrose doesn't reduce Tollen's reagent and Fehling's reagent because it is
  - a) Non reducing sugar
  - b) Reducing sugar
  - c) Both in certain cases
  - d) None of the above

#### **Explanation**

Sucrose is a non-reducing sugar as it does not reduce Tollen's or Fehling's reagent.

- 46. Sucrose, on heating slowly and carefully, melts and when allowed to cool, it solidifies to pale yellow glassy mass called
  - a) Moseley's sugar
  - b) Barley's sugar
  - c) Caramel's sugar
  - d) None of the above

#### **Explanation**

Sucrose, on heating slowly and carefully, melts and when allowed to cool, it solidifies to pale yellow glassy mass called 'Barley Sugar'.

- 47. When heated to 200C, sucrose loses water to form brown amorphous mass called
  - a) Caramel
  - b) Barley
  - c) Moseley
  - d) All the above

# **Explanation**

When heated to 200C, it loses water to form brown amorphous mass called caramel. On strong heating, it chars to almost pure carbon giving the smell of burnt sugar.

- 48. Sucrose is composed of
  - a) α-D-glucose unit
  - b) β-D-fructose unit
  - c) Both a and b
  - d) None of the above

# **Explanation**

It is composed of  $\alpha$ -D-glucose unit and  $\beta$ -D-fructose unit. These units are joined by a- $\beta$ -glycosidic linkage between C-1 of the glucose unit C-2 of the fructose unit.

- 49. The most important polysaccharides are
  - a) Starch
  - b) Cellulose
  - c) Both a and b
  - d) None of the above

Polysaccharides are polymers of monosaccharides. The most important polysaccharides are starch and cellulose.

- 50. The general formula of polysaccharide is
  - a) (C7H10O5)n
  - b) (C6H11O5)n
  - c) (C6H10O7)n
  - d) (C6H10O5)n

#### **Explanation**

Polysaccharide have a general formula of (C6H10O5)n

- 51. Does starch have taste or smell?
  - a) Yes
  - b) No
  - c) Only taste
  - d) Only smell

## **Explanation**

Starch is a white amorphous substance with no taste or smell.

- 52. Which of the following is a white amorphous substance?
  - a) Cellulose
  - b) Starch
  - c) Both a and b
  - d) None of the above

## **Explanation**

Starch is a white amorphous substance with no taste or smell.

- 53. In which of the following is starch present?
  - a) Wheat
  - b) Corn
  - c) Barley
  - d) All the above

# **Explanation**

Starch is a white amorphous substance with no taste or smell. Starch is present in wheat, corn, barley, rice, potatoes, nuts, etc

- 54. When heated to a temperature between 200-250C, starch gets converted into
  - a) Dextrin
  - b) Sucrose
  - c) Fructose
  - d) Both b and c

When heated to a temperature between 200–250oC, it changes into dextrin. At higher temperature charring occurs

- 55. Does starch yield glucose on any reaction?
  - a) Yes
  - b) No
  - c) Doesn't gets induced
  - d) None of the above

## **Explanation**

When boiled with dilute acid, starch ultimately yields glucose

- 56. Starch on reaction with this, yields maltase
  - a) Diastase
  - b) Fructose
  - c) Sucrose
  - d) All the above

## **Explanation**

When treated with enzyme, diastase, it yields maltose.

$$2 (C_6H_{10}O_5)_n + nH_2O \longrightarrow nC_{12}H_{22}O_{11}$$
Maltose

- 57. The starch obtained from same source consists of fractions, what are they
  - a) Amylase
  - b) Amylopectin
  - c) Both a and b
  - d) None of the above

Even the starch obtained from same source consists of two fractions are amylose and amylopectin.

- 58. Starch on reaction with iodine gives what color?
  - a) Red
  - b) Blue
  - c) Blue green
  - d) Orange

#### **Explanation**

Starch solution gives a blue colour with a drop of iodine. The exact chemical nature of starch varies from source to source.

- 59. Cellulose is found in which of the following
  - a) Plants
  - b) Animals
  - c) Amphibians
  - d) Both b and c

#### **Explanation**

Cellulose is found in all plants and so is the most abundant of all carbohydrates.

- 60. In plant cell, which of the organelles is made up of cellulose
  - a) Ribosome
  - b) Cell wall
  - c) Nucleus
  - d) Mitochondria

## **Explanation**

Cellulose is found in all plants and so is the most abundant of all carbohydrates. It is the material used to form cell walls and other structural features of the plants.

- 61. When it is boiled with dilute H2SO4, it is completely hydrolysed into
  - a) D glucose
  - b) H glucose
  - c) C glucose
  - d) None of the above

## **Explanation**

Cellulose is insoluble in water and in most of the organic solvents. When it is boiled with dilute H<sub>2</sub>SO<sub>4</sub>, it is completely hydrolysed into D-glucose.

$$(C_6H_{10}O_5)_n$$
 +  $nH_2O$   $\longrightarrow$   $nC_6H_{12}O_6$  Glucose

- 62. Amino acid contains which of the following group
  - a) Carboxyl group
  - b) Amine group
  - c) Both a and b
  - d) None of the above

An amino acid is bifunctional organic molecule that contains both a carboxyl group, —COOH as well as an amine group, —NH2.

- 63. Amino acids derived from proteins have the amino group on the
  - a) Alpha (α) carbon
  - b) Beta carbon
  - c) Alpha and beta carbon
  - d) None of the above

#### **Explanation**

Amino acids derived from proteins have the amino group on the alpha ( $\alpha$ ) carbon, that is, the carbon atom next to the carboxyl group.

- 64. In amino acids, which of the following determines the property of proteins
  - a) Position of R group
  - b) Position of NH2
  - c) Position of OH group
  - d) Both a and c

## **Explanation**

The aminoacids differ in the nature of R-group bonded to  $\alpha$ -carbon atom. The nature of R-group determines the properties of proteins.

- 65. Can the human body synthesize amino acids that it needs for good health?
  - a) Yes
  - b) No
  - c) Not sure
  - d) None of the above

# **Explanation**

Nearly twenty five amino acids have been obtained from the hydrolysis of proteins. The human body can synthesise some of the amino acids that it needs for maintaining good health.

- 66. Amino acids that cannot be synthesized by human, must be taken through the diet, it is known as
  - a) Essential amino acids

- b) Non essential amino acids
- c) Carotene amino acids
- d) None of the above

Those amino acids that cannot be synthesised by the body and must be supplied in the diet are called Essential Amino acids.

- 67. Amino acids that are synthesized by tissues of human body is known as
  - a) Essential amino acids
  - b) Non essential amino acids
  - c) Carotene amino acids
  - d) All the above

### **Explanation**

The amino acids that can be synthesised from other compounds by the tissues of the body are called Non - essential Amino acids.

- 68. Except the following  $\alpha$ -amino acid, all the other amino acids have asymmetric carbon atom?
  - a) Glycine
  - b) Glycerine
  - c) Glycol
  - d) All the above

## **Explanation**

Except Glycine (NH2 – CH2 – COOH), all the  $\alpha$ -amino acids have an asymmetric carbon atom. Hence, each of these amino acids can exist as optical isomers.

- 69. Due to the presence of an acidic and a basic group in the same molecule, amino acids exist in an ionic form called a
  - a) Chloride ion
  - b) Nitrite ion
  - c) Zwitter ion
  - d) None of the above

## **Explanation**

Due to the presence of an acidic and a basic group in the same molecule, amino acids exist in an ionic form called a Zwitter ion where the proton of –COOH group is transferred to the –NH2 group.

- 70. When an ionised form of amino acid is placed in an electric field, it will migrate towards
  - a) Same electrode
  - b) Opposite electrode
  - c) Both the electrode
  - d) None of the above

When an ionised form of amino acid is placed in an electric field, it will migrate towards the opposite electrode. In acidic solution (low pH), the cation (II) move towards cathode. In basic solution (high pH), the anion (III) move towards anode.

- 71. When the Zwitter ion is placed in electric field, it will migrate towards
  - a) Same electrode
  - b) Opposite electrode
  - c) Does not move
  - d) None of the above

### **Explanation**

The zwitter ion does not move towards any of the electrodes.

- 72. The pH at which the amino acid shows no tendency to migrate when placed in an electric field is known as
  - a) Zero electric point
  - b) Isoelectric point
  - c) Non electricpoint
  - d) All the above

## **Explanation**

The pH at which the amino acid shows no tendency to migrate when placed in an electric field is known as isoelectric point. This is characteristic of a given amino acid.

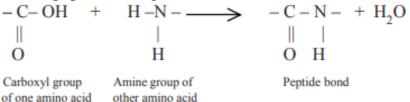
- 73. \_\_\_\_\_ are formed by joining the carboxyl group of one amino acid to the  $\alpha$ -amino group of another amino acid.
  - a) Proteins
  - b) Carbohydrate
  - c) Starch
  - d) None of the above

# **Explanation**

Proteins are formed by joining the carboxyl group of one amino acid to the  $\alpha$ -amino group of another amino acid.

- 74. The bond formed between two amino acids by the elimination of a water molecule is called a
  - a) Peptide link
  - b) Peptide bond
  - c) Peptide chain
  - d) Both a and b

The bond formed between two amino acids by the elimination of a water molecule is called a peptide linkage or bond.



75. The product formed by linking amino acid molecules through peptide linkages, – CO – NH –, is called a

- a) Peptide
- b) Fructose
- c) Sucrose
- d) Both a and c

## **Explanation**

The product formed by linking amino acid molecules through peptide linkages, - CO - NH -, is called a peptide. Peptides are further designated as di, tri, tetra or penta peptides accordingly as they contain two, three, four or five amino acid molecules, same or different, joined together.

- 76. \_\_\_\_\_form a group of organic compounds which are widely distributed in living system.
  - a) Lipids
  - b) Starch
  - c) Both a and b
  - d) None of the above

## **Explanation**

Lipids form a group of organic compounds which are widely distributed in living system.

77. Find out the types of lipids

- a) Simple
- b) Compound
- c) Derived
- d) All the above

Lipids are mainly divided into three types, namely simple, compound and derived, depending on the basis of the nature of products obtained on hydrolysis.

- 78. Which of the following in our body act as storage for energy?
  - a) Fats
  - b) Oils
  - c) Both a and b
  - d) None of the above

#### **Explanation**

Fats and oils act as storage of energy in plants and animals. In the animal body, fats are stored in fatty tissues, which are almost pure fat.

- 79. Fat gives how much amount of energy as provided by carbohydrates or proteins
  - a) 5 times
  - b) 4 times
  - c) 3 ½ times
  - d) 2 1/4 times

## **Explanation**

Fat give about 2½ times as much energy as carbohydrates or proteins. Thus, as far as weight is concerned, storage of fat is the most economical way for the body to maintain a reserve energy supply.

- 80. Fat is \_\_\_\_ conductor of heat.
  - a) Good
  - b) Bad
  - c) Semiconductor
  - d) None of the above

# **Explanation**

Fat is a poor conductor of heat. Hence, fat layer under skin serves to prevent losses of heat from the body.

- 81. \_\_\_\_\_on the surface of plants and fruits protects them from excessive loss of moisture and becoming infected with fungi and bacteria.
  - a) Proteins
  - b) Fat
  - c) Wax coating

d) None of the above

#### **Explanation**

Wax acts as a protective agent on the surfaces of animals and plants. Waxy coating on the surface of plants and fruits protects them from excessive loss of moisture and becoming infected with fungi and bacteria.

- 82. Lecithins, and cephalins are the examples of
  - a) Lipids
  - b) Disaccharide
  - c) Phospholipids
  - d) Both a and b

#### **Explanation**

Phospholipids like lecithins, and cephalins play a greater role in biosystem.

- 83. \_\_\_\_\_are required for normal transport and utilisation of other lipids, especially in the liver.
  - a) Lecithins
  - b) Cephalins
  - c) Both a and b
  - d) None of the above

### **Explanation**

The lecithins are required for normal transport and utilisation of other lipids, especially in the liver. lecithin aids in the organisation of the cell structure.

- 84. In which region of human body cephalins are found?
  - a) **Brain**
  - b) Kidney
  - c) Liver
  - d) Heart

### **Explanation**

Cephalins are found in the brain. Cephalins have been implicated in the process of blood coagulation.

- 85. Galactolipids occur in considerable amount in the
  - a) White matter of brain
  - b) Grey matter of brain
  - c) Blue matter of brain
  - d) None of the above

## **Explanation**

Galactolipids occur in considerable amount in the white matter of the brain and of all nervous tissue. The presence of galactose in the glycolipids suggests the importance of milk sugar in the diet of infants and children during the development of the brain and nervous system.