



### **CHEMISTRY**

## BOOKS - MARVEL CHEMISTRY (HINGLISH)

## BIOMOLECULES



**1.** The complex lifeless organic substances which build up living organisms and are

required for their growth and maintenance

are

A. Grignard reagent

B. fibres

C. Boimolecules

D. polymer

Answer: C

**2.** which of the following supply maximum energy in our metabolism ?

A. Proteins

B. Fats

C. Oils

D. Carbohydrates

Answer: D

3. The function of fat in the body is to act as

A. Thermal insulator

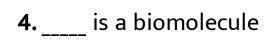
B. The absorber of minerals

C. Catalyst

D. Enzyme

Answer: A





A. Protein

B. Enzyme

C. lipid

D. All of the above

Answer: D

Watch Video Solution

**5.** Carbohydrates are represented by the general formula

#### A. $C_x H_{2x} O_{2x+2}$

### $\mathsf{B.}\, C_x(H_2O)_x$

 $\mathsf{C.}\, C_x(H_2O)_y$ 

D.  $C_x H_{2x+1} O$ 

#### Answer: C

Watch Video Solution

6. Glucose and fructose are

A. Isotones

**B.** Isomers

C. Isobars

D. Isotopes

Answer: B

Watch Video Solution

**7.** Which of the following compound is a polysaccharide

A. Cellulose

#### B. Glucose

C. Maltose

D. Galactose

Answer: A

Watch Video Solution

8. Carbohydrates contain?

A. 
$$-\overset{|}{C}=O$$
 group



D. all of these

#### Answer: D



9. Stachyose is

A. Monosaccharide

B. Disaccharide

C. Trisaccharide

D. Tetrasaccharide

#### Answer: D

Watch Video Solution

#### 10. carbohydrates are stored in mammals as

A. Sugar

B. Glucose

C. Glycogen

D. Frutose





**11.** To become a carbohydrate, a compound must contain at least:

A. 2 carbon

B.4 carbon

C. 3 carbon

D. 6 carbon





## **12.** Which of the following carbohydrates is a disaccharide

A. Raffinose

B. Fructose

C. Maltose

D. Glucose





#### 13. Raffinose is an example of

A. Trisaccharide

- B. Disaccharide
- C. Monosaccharide
- D. Polysaccharide

Answer: A



14. An animal polysaccharide is

A. Amylopectin

B. Glycogen

C. Cellulose

D. Amylase

Answer: B

15. Which carbohydreates is used in silvering

of mirrors

A. Fructose

B. Surcose

C. Glucose

D. Starch

Answer: C

16. Milk sugar is

A. Lactose

B. Surcose

C. Glucose

D. Maltose

Answer: A



17. A carbohydrate which cannto be hydrolysed

to simpler compounds, is called

A. Disaccharide

B. Monosaccharide

C. Trisaccharide

D. Polysaccharide

Answer: B

18. Hydrolysis of sucrose is called

A. Inversion

**B. Esterificaion** 

C. Saponification

D. Hydration

Answer: A



**19.** The common formula of trisaccharide is

#### A. $C_{18}H_{30}O_{15}$

#### B. $C_{18}H_{32}O_{16}$

C.  $C_{18}H_{34}O_{17}$ 

D.  $C_{18}H_{36}O_{18}$ 

#### Answer: B

Watch Video Solution

20. Identify odd compound

#### A. Glucose

#### B. Galactose

C. Mannose

D. Fructose

#### Answer: D

Watch Video Solution

#### 21. Which of disaccharide contains glucose as

sub -unit?

A. Sucrose

B. Maltose

C. Lactose

D. All of the above

Answer: D

Watch Video Solution

22. Glucose and fructose are

A. Optical isomers

B. Geometrical isomers

C. Functional isomers

D. Chain isomers

#### Answer: C



#### 23. Glucose does not contain

A. one -CHO group

B. one ketonic group

C. one  $-CH_2OH$  group

## D. four $- \overset{|}{CHOH}$ groups

Answer: B

Watch Video Solution

**24.** The number of chiral carbon atoms in a glucose molecule is

A. 2

B. 3

C. 4

D. 5

#### Answer: C

Watch Video Solution

#### 25. On hydrolysis of potato sugar final product

is

A. Fructose

B. Glucose

C. Canesugar

D. Mixure of glucose and fructose

Answer: B

Watch Video Solution

**26.** Which of the following has maximum sweetness?

A. Glucose

B. Fructose

C. Maltose

#### D. Sucrose

Answer: B

Watch Video Solution

#### **27.** Which of the following is a polysaccharide ?

A. Cellulose

B. Polythene

C. Glucose

D. Nylon





#### 28. Glucose cannot be classified as

- A. Monosaccharide
- B. Aldose
- C. Carbohydrate
- D. Oligosaccharide

Answer: D



#### **29.** Which of the following is aldopentose ?

A. Arabinose

B. Glucose

C. Fructose

D. Tristearin

Answer: A

30. Stachyose is an example of

#### A. Oils

- B. Carbohydrate
- C. Proteins
- D. Ester

Answer: B

**31.** Which of the following is the simplest

carbohydrate?

A. Glucose

B. Sucrose

C. Maltose

D. Lactose

Answer: A

**32.** Glucose has \_\_\_\_\_ optical isomers.

A. 4

B. 8

C. 16

D. 10

Answer: C



**33.** Stachyose(tetrasaccharide) on hydrolysis produces

A. One molecule of glucose and fructose

and two molecule of galactose

B. One molecule of glucose and wo

molecules of fructose

C. One molecule of galactose and two molecules of glucose

#### D. Two molecules of glucose and fructose

each

#### Answer: A



#### **34.** To prepare glucose from canesugar\_\_\_\_\_ is

added or seeding.

A. Lactose

B. Surcose

C. Fructose

D. Glucose

#### Answer: D

**Watch Video Solution** 

# **35.** Solvent used for recrystallisation of glucose is

A. Methanol

B. Benzene

C. Ethanol

D. Dry ether

#### Answer: C



#### 36. For preparation of glucose from sucrose

the condition required are

A. 90% ethanol ,concentrated HCL,333K

temperature and two hours

#### B. 50% ethanol ,500K temperature and two

hours

C. 90% methanol, concentrated hno3, 222k

temperature and two hours

D. Water, concentrated hcl, 473k

emperature and fourty eight hours

Answer: A

37. To obtain glucose, ater hydrolysis of starch

the resulting solution is neuralised by

A. NaOH

B. KOH

 $C. NaHCO_3$ 

D.  $CaCO_3$ 

Answer: D

**38.** Glucose on reduction with  $Na \,/\, Hg$  and

water gives:

A. Gluconic acid

B. Saccharide acid

C. Sorbitol

D. Formaldehyde

Answer: C

**39.** Glucose when treated with  $HNO_3$  gives

A. Acetic acid

B. Saccharic acid

C. Gluconic acid

D. Sorbitol

Answer: B

40. Glucose when treated with bromine water

gives

- A. Saccharide acid
- B. Oxalic acid
- C. Glucose oxime
- D. Gluconic acid

#### Answer: D

41. On condensation with hydroxylamine

glucose gives

A. Glucose oxime

B. Glucose hydrazine

C. Glucose hydrazone

D. Gluco oxime

Answer: A

42. Excess of phenyl hydrazine when treated

with glucose gives

A. Glucose phenylhydrazine

B. Glucose oxime

C. Glucose phenylhydrazone

D. Glucosazone

Answer: D

43. Acetylation of glucose give

A. Glucose acetate

B. Glucose triacetate

C. Glucose pentaacetate

D. Glucose diacetate

Answer: C

44. On heating glucose with Fehling solution.

We get a precipitate whose colour is?

A. Blue

B. Red

C. white

D. Black

**Answer: B** 

# 45. The number of hydroxyl groups in glucose

is

A. Six

B. Four

C. Five

D. Three

Answer: C

46. Which one is a disaccharide?

A. Glucose

**B.** Fructose

C. Xylose

D. Sucrose

Answer: D



**47.** Glucose gives silver mirror with Tollen's reagent, it shows the presence of

A. Acidic group

B. Alcoholic group

C. Ketonic group

D. Aldehydic group

### Answer: D

48. Which of the following is not a

monosaccharide?

A. Glucose

**B.** Fructose

C. Lactose

D. Ribose

Answer: C

**49.** Which of the following does not refer to the principle forms of carbohydrate present in our food?

A. Cellulose

B. Starch

C. Surcose

D. Fructose

Answer: A



50. Cellulose is a

A. Protein

- B. Carbohydrate
- C. Simple sugar
- D. Oligosaccharide

Answer: B



51. Cane sugar is

A. Glucose

B. Maltose

C. Surcose

D. Fructose

Answer: C

**52.** Cane sugar on hydrolysis gives

A. glucose and lactose

- B. glucose and fructose
- C. glucose
- D. glucose and maltose

Answer: B

53. The monosaccharides are

A. sweet in taste

B. sour in taste

C. soluble in water

D. both (a) and (c)

Answer: D

# 54. If monosaccharide contains an aldehyde

group it is known As

A. aldose

B. ketose

C. pentose

D. hexose

Answer: A

55. Cellulose, glycogen and starch have a thing

in common and that is

A. glucose

- B. fructose
- C. arabinose
- D. erythrose

Answer: A

56. After hydrolysis of cane-sugar, the fructose

and glucoseare separated out because

- A. glucose is less soluble in alcohol
- B. fructose is more soluble in alcohol
- C. both are insoluble in alcohol
- D. both (a) and (b)

#### Answer: D

57. The polymer formed with same

monosaccharide is called as

A. teropolysaccharide

B. homopolysaccharide

C. oligosaccharide

D. disaccharide

Answer: B

58. Carbohydrates on hydrolysis produces final

product which Is

A.  $\alpha$  -amino acid

- B. glucose
- C. oils and fats
- D. monosaccharide

#### Answer: D

**59.** Which of the following is starch?

# A. $C_6 H_{12} O_6$

B.  $(C_6 H_{10} O_5)_n$ 

 $\mathsf{C}.\left(C_{6}H_{12}O_{6}
ight)_{6}$ 

D.  $C_{12}H_{22}O_{11}$ 

Answer: B

**60.** Which of the following is non-reducing sugar?

A. Glucose

- B. Starch
- C. Fructose
- D. Starch

Answer: D

View Text Solution

#### 61. Sucrose is

A. non sugar

B. monosaccharide

C. reducing sugar

D. non reducing sugar

Answer: D

Watch Video Solution

62. Which of the following is reducing sugar?

- A. Fructose
- B. Glucose
- C. Sucrose
- D. Cane sugar

#### Answer: B

Watch Video Solution

63. Glucose is also known as

A. Grape sugar

- B. Blood sugar
- C. Dextrose
- D. All of these

### Answer: D

Watch Video Solution

64. Select from following, ketohexose :

A. lpha-Glucose

B.  $\beta$ -Glucose

C. Fructose

D. Both b and c

#### Answer: C



# **65.** Which of the following is trisaccharide?

- A. Glucose
- B. Fructose
- C. Raffinose

# D. Arabinose

#### Answer: C

Watch Video Solution

# 66. Inulin is an example of

- A. derived protein
- B. oligosaccharide
- C. polysaccharide
- D. monosaccharide





# 67. Which of the following is dextrose?

A. Fructose

B. Glucose

C. Sucrose

D. Starch

Answer: B



# **68.** Carbohydrate containing five hydroxyl

# groups and oneKetone group is

A. glucose

B. fructose

C. sucrose

D. starch

#### Answer: B





# **69.** Carbohydrate which does not undergo hydrolysis is Called

- A. disaccharide
- B. monosaccharide
- C. trisaccharide
- D. oligosaccharide

# Answer: B

**70.** Glucose when heated with Tollen's reagent gives

- A. brown precipitate
- B. white precipitate
- C. precipitate of pure Ag
- D. No reaction

Answer: C

71. Hydrolysis of disaccharide lactose gives

A. glucose+ fructose

- B. glucose only
- C. glucose + galactose
- D. glucose + mannose

Answer: C

72. Glucose  $\rightarrow$  ethyl alcohol in this reaction

enzyme is :

A. zymase

B. invertase

C. maltase

D. diastase

**Answer: A** 

73. Which of the following monosaccharides is

a pentose?

A. diastase

- B. glucose
- C. fructose
- D. arabinose

Answer: D

74. Glucose obtained from natural sources is

A. dextro rotatory

B. laevo rotatory

C. racemic mixture

D. meso- form

Answer: A

75. Potato pulp when heated with dil.  $H_2SO_4$ 

under pressure, gives

A. sucrose

B. glucose

C. glucose and fructose

D. glucose sucrose

#### **Answer: B**

76. Which is the most abundant carbohydrate

in nature ?

A. cellulose

- B. starch
- C. glucose
- D. fructose

Answer: A

77. Lactose is isomeric with

A. glucose

B. maltose

C. fructose

D. galactose

**Answer: B** 

## **78.** The open glucose and fructose have \_\_\_\_\_ and \_\_\_\_\_ chiral centre

- A. 4,4
- B. 4,3
- C. 3,3
- D. 3,4

#### Answer: B

79. The common source of carbohydrates, fats

and proteins is

- A. rice
- B. milk
- C. egg
- D. ghee

Answer: B



80. Carbohydrates may be regarded as

- A. aromatic compounds
- B. alicyclic compounds
- C. polyfunctional compounds
- D. aliphatic compounds

Answer: C

81. Why is chalk powder added after complete

hydrolysis of starch?

A. to solidify glucose

B. to remove  $CaSO_4$ 

C. to neutralize  $H_2SO_4$ 

D. to crystalise starch

#### Answer: C

82. Which of the following is laevo rotatory?

- A. Fructose
- B. Glucose
- C. Sucrose
- D. Maltose

Answer: A



83. Monosaccharides have carbons



### **84.** Which of the following is polysaccharide?

- A. Insulin
- **B.** Peptones
- C. Inulin
- D. Maltose

#### Answer: C

85. Stachyose has formula



86. Maltose is

- A. reducing sugar
- B. non sugar
- C. tetrasaccharide
- D. non-reducing sugar





# **87.** Which of the following statement is not correct for Fructose ?

A. Fructose is ketohexose

B. The cyclic five membered structure of

fructose are

C. Fructose belongs to L - series

#### D. Fructose is laevorotatory compound

#### Answer: C

Watch Video Solution

# **88.** On crystallization from hot and saturated aqueous solution, B-glucose is obtained at

A. 303K

B. 323K

C. 371K

#### D. 423K

#### Answer: C

View Text Solution

# **89.** Which of the following statement is not correct for Glucose?

A. Glucose with hydrogen cyanide give

glucose cyanohydrin

B. Crystalline forms of  $\alpha$  and  $\beta$  Glucose

called anomers

C. Glucose on prolonged heating with HI

gives n-hexane

D. Glucose give positive test with Schiff

base

Answer: D

**90.** In Maltose\_\_\_ linkage is observed.

A. Peptide

B. Glycosidic

C. Glyconic

D. Phosphate ester

Answer: B

91. Cellobiose exhibits bond.

A. 1-2  $\alpha$  glycoside

B. 1-2  $\beta$  glycoside

C. 1-4  $\alpha$  glycoside

D. 1-4  $\beta$  glycoside

Answer: D

92. Sucrose molecule consists of

- A. a glucofuranose and a fructopyranose
- B. a glucofuranose and a fructofuranose
- C. a glucopyranose and a fructopyranose
- D. a glucopyranose and a fructofuranose

Answer: D

**93.** The number of  $sp^2$  and  $sp^3$  hybridized carbon atoms in fructose are respectively.

A. 4 and 2

B. 2 and 4

C. 1 and 5

D. 5 and 1

Answer: C

**94.** What is the proportion of hydrogen and oxygen in molecule of all member of carbohydrate ?

- A. 2:1
- B.1:1
- C. 1: 2
- D. No certain ratio

#### Answer: A



### A. Disaccharide

- B. Trisaccharide
- C. Tetrasaccharide
- D. Polysaccharide

#### Answer: C

**96.** Cyclic configuration for glucose is called Glucopyranose, because its cyclic chain contains carbon and oxygens

- A. 6,1
- B. 6,2
- C. 5,1
- D. 4,1

#### Answer: C



**97.** In sucrose  $\alpha - D - (+)$ -glucose and  $\beta - D - (-) - f$ ructose are linked by \_\_\_\_\_ chain.

- A. Glycolipid
- B. Glycosidic
- C. Phospholipid
- D. Phosphosidic

#### Answer: B

98. \_\_\_\_ is not a cellulose

A. Nylon fibre

B. Linen

C. Rayon

D. Acetate fibre

Answer: A

**99.** Which reaction isn't given by glucose ?

- A. Glucose is oxidised by tollen's reagent
- B. Glucose gives violet colour with schiff's

reagent

- C. Fehling's solution is reduced by glucose
- D. Glucose gives addition product with

sodium hydrogensulphite

Answer: B

100. Fructose is

- A. Aldopentose
- B. Ketopentose
- C. Aldohexos
- D. Ketohexose

#### Answer: D

**101.** Structure R is formed by joining structure P and Q, sogive the names of P, Q, R. A.  $P = lpha - D + \, \mathsf{glucose}$  ,  $Q = eta - D + \,$ galectose,  $R = \alpha$ +lactose B.  $P = \beta - D +$ galectose ,  $Q = lpha - D + \, \mathsf{glucose}, \mathsf{R} = lpha \mathsf{+}\mathsf{lactose}$ C.  $P = lpha - D + \, \mathsf{glucose}$  ,  $Q = lpha - D + \,$ galectose,  $R = \alpha$ +lactose

D. P = eta - D +galectose

Q=eta-D+ glucose, R=eta-D

,

#### +glucose

#### Answer: B

View Text Solution

### **102.** Which of the following is not protein ?

A. DNA

B. nail

C. wool

D. hair

Answer: A



103. The protein present in hair and nails is

A. mucin

B. keratin

C. caesin

D. albumin

Answer: B

Watch Video Solution

### 104. Proteins are hydrolysed by enzymes into

A. Amines

- B. Carboxylic acid
- C.  $\alpha$  amino acid
- D. Amides





# **105.** Among the following the fibrous protein is

- A. Casein of milk
- B. Keratin
- C. Egg albumin
- D. Haemoglobin

#### Answer: B



**106.** Which one of the following is a Zwitter ion?

A. 
$${}^{+}H_{2}N - CH - COO^{-}$$
  
 ${}^{|}_{R}$   
B.  $NH_{3} - CH - COO^{+}$   
 ${}^{|}_{R}$   
C.  ${}^{+}H_{3}N - CH - COO^{-}$   
 ${}^{|}_{R}$   
D.  ${}^{+}H_{4}N - CH - COO^{-}$ 





# **107.** Irreversible precipitation of proteins is called

A. Hydrolysis

**B.** Denaturation

C. Rearrangement

D. Electrolysis





# **108.** Which of the following food stuffs contains nitrogen?

A. Carbohydrates

**B.** Fats

C. Proteins

D. both (a) and (b)





### 109. The prosthetic group in glycoproteins is

A. Carbohydrate

- B. Nucleic acid
- C. Glue
- D. Fat

Answer: A



### 110. The prostetic group of haemoglobin is

A. Fe

B. Heme

C. Mg

D. Globulin

Answer: A

**111.** The sequence in which amino acids are linked to one another in a protein molecule is called its:

A. secondary structure

B. tertiary structure

C. primary structure

D. quaternary structure

# Answer: C

## 112. Denatured protein is

A. simple protein

B. derived protein

C. fibrous protein

D. conjugated protein

Answer: B

113. Solution of protein in alkali reacts with

copper sulphate to give \_\_\_\_\_colour product.

A. Blue

B. Pink

C. Red

D. Purple

Answer: D



114. Which of the following reagents are used

in Million's test?

A.  $HCl + CuSO_4$ 

 $\mathsf{B}.HNO_3 + CuSO_4$ 

 $C. NaOH + CuSO_4$ 

D.  $Hg_2(NO_3)_2 + Hg(NO_3)_2 + NHO_3$ 

Answer: D

115. Biuret test of proteins is due to

A. 
$$-NH_2$$
 group

B. 
$$-\overset{|}{C}=0$$
 group

C. peptide bond

 $\mathrm{D.}-COOH~\mathrm{group}$ 

#### Answer: C



116. Which of the following is a derived protein

A. haemoglobin

B. proteoses

?

C. globulin

D. prolamin

**Answer: B** 

hydrolysis of

A. proteins

B. carbohydrates

C. glycerides

D. alkyl halides

Answer: A

118. The protein responsible for transport of

oxygen in the blood stream is

A. insulin

- B. collagen
- C. haemoglobin
- D. albumin

Answer: C

119. Peptide linkage in protein is tested by

A. Millons test

B. Hydrazin test

C. Carbylamine test

D. Biuret test

Answer: D

**120.** The  $\alpha$ -amino acids are the building material of

A. Carbohydrates

B. Fats

C. Amides

D. Proteins

Answer: D

## **121.** The simplest lpha - amino acid is

A. glycine

B. albumin

C. casein

D. valine

Answer: A



122. The globular protein is

A. myosin

B. casein

C. keratin

D. fibroin

Answer: B

Watch Video Solution

**123.** Insulin, a hormone is chemically

B. a steroid

C. a carbohydrate

D. a protein

Answer: D

Watch Video Solution

124. The metal ion present in haemoglobin and

responsible for oxygen uptake is

A. 
$$Mg^{2\,+}$$

# $\mathsf{B.}\,Fe^{2\,+}$

# C. $Co^{3+}$

D.  $Ca^{2+}$ 

## Answer: B

Watch Video Solution

# 125. The metal present in insulin is

A. Zinc

B. Iron

C. Copper

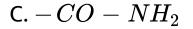
D. Magnesium

#### Answer: A



# **126.** Which of the following is a peptide linkage?

$$A. -CO - NH - B. - CO - NH - O$$



 $D. -CO - O - NH_4$ 

#### Answer: A



127. The prosthetic group is present in

- A. Simple proteins
- B. derived proteins
- C. conjugated proteins

D. all proteins

Answer: C

Watch Video Solution

128. Peptide bond is a key feature in:

A. proteins

B. vitamins

C. Nucleotide

D. Polysaccharide

### Answer: A



**129.** Large molecules can be built by the combination of a number of smaller molecules. These smaller molecules are called

A. isomers

B. monomers

C. dimers

D. polymers





# **130.** Biuret test is used for the detection of:.

A. saturated oils

- B. sugars
- C. proteins
- D. fats





# 131. The test of proeins with $Hg_2(NO_3)_2$ & $Hg(NO_3)_2$ in $HNO_3$ is called

A. Biuret test

B. Million's test

C. Carbylamine test

D. Xanthoproteic test

## Answer: B





# 132. Lipo protein contain the prosthetic group

as

- A. carbohydrate
- B. fat
- C. nucleic acid
- D. phosphorus

Answer: B



**133.** Which of the following is conjugated protein ?

A. Globulin

B. Haemoglobin

C. Chlorophyll

D. Both b and c

Answer: D

134. Nucleoprotein has the prosthetic group

A. phosphoric acid

B. glucose

C. ucleic acid

D. lipids

Answer: C

**135.** Magnesium is present as co-factor in which of the following?

A. Haemoglobin

B. Chlorophyll

C. Nucleoprotein

D. Glycoprotein

Answer: B

136. Which of the following is not a

conjugated protein?

A. Haemoglobin

B. Chlorophyll

C. Nucleoprotein

D. Albumin

Answer: D

**137.** In which of the following co-factor is present ?

- A. Simple protein
- B. Conjugated protein
- C. Derived protein
- D. Egg albumin

### Answer: B

138. Colour developed when a drop of aqueous

 $CuSO_4$  is added to alkaline solution of protein is

A. Yellow

B. Blue

C. Green

D. Violet

Answer: D

139. The main structural feature of proteins is:

A. Peptide linkage

B. Ester linkage

C. Ether linkage

D. Hydrogen linkage

Answer: A

Watch Video Solution

140. The other name of protein is

A. Polysaccharides

**B.** Fats

C. Polyesters

D. Polypeptides

Answer: D

Watch Video Solution

141. The protein which on hydrolysis produces

only  $\alpha$  - amino acids is

- A. Simple protein
- B. conjugated protein
- C. nucleo protein
- D. phosphoprotein

Answer: A

Watch Video Solution

**142.** Carbohydrate is present as prosthetic group in which of following?

- A. Chromoprotein
- B. Glycoprotein
- C. Phosphoprotein
- D. Lipoprotein

Answer: B

Watch Video Solution

143. In Biuret test, which of the following used

as reagents?

A. HCl and  $CuSO_4$ 

B. NAOH and  $CuSO_4$ 

C. NaCl and  $CuSO_4$ 

D.  $NH_4OH$  and  $CuSO_4$ 

Answer: B

Watch Video Solution

144. Biuret test is not answered by

A. Proteins

B. Amino acids

C. Tripeptides

D. Polypeptides

Answer: B

Watch Video Solution

# **145.** The coagulation of protein solution is called

A. denaturation

B. deamination

C. dehydration

D. degradation

Answer: A

Watch Video Solution

**146.** The simplest lpha - amino acids is

A. alanine

B. glycine

C. valine

D. cysteine

Answer: B



**147.** On heating with conc.  $HNO_3$ , proteins

give yellow colour. This test is called

A. oxidizing test

B. xanthoproteic test

C. Millons test

D. acid base test

### Answer: B



# **148.** Egg albumin is an example of following?

A. globular protein

B. fibrous protein

C. derived protein

D. conjugated protein

Answer: A

Watch Video Solution

149. Protein gives salt with

A. an acid

B. a base

C. both an acid and a base

D. water





# **150.** Which one of the following is fibrous protein in tendons?

A. keratin

B. Globulin

C. alkalies

D. Collagen





## 151. Proteins can undergo hydrolysis with

A. acids

B. alkalies

C. enzymes

D. all of these

Answer: D



## **152.** An amino acid with a hydroxyl group is

A. alanine

- B. tyrosine
- C. valine
- D. phenyl alanine

### Answer: B

153. Which of the following is not a protein ?

A. wool

B. hair

C. cellulose

D. nail

Answer: C

154. Which one of the following is the general

structural formula of an lpha-amino acid ?

A.  $RCH_3$ 

B.  $RCH(NH_2)OH$ 

 $\mathsf{C.}\,RCH_2NH_2$ 

D.  $RCH(COOH)NH_2$ 

Answer: D

**155.** Casein of milk is an example of following:

A. Simple protein

B. nucleo protein

C. phospho protein

D. glycol protein

Answer: C



**156.** Which of the following is derived protein?

A. Inulin

**B.** Peptones

C. Histone

D. Haemoglobin

Answer: B

Watch Video Solution

157. Nucleoprotein has the prosthetic group

A. Phosphoric acid

B. Glucose

C. Nucleic acid

D. Aldehyde

Answer: C

Watch Video Solution

158. Protein produces violet colour in which of

the following

A. Million's test

B. Biuret test

C. Ninhydrin test

D. Molish test

Answer: C

Watch Video Solution

159. Denaturated protein is

A. Hydrolysed protein

B. Oxidised protein

C. Coagulated protein

D. Reduced protein

#### Answer: C

Watch Video Solution

# **160.** Which of the following statement is incorrect?

A. A denatured protein is water insoluble

B. A denatured protein is water soluble

C. A denatured protein occurs on coagulation D. A denatured protein cannot be converted back to its original active form

Answer: B

Watch Video Solution

**161.** Which one of the following molecules will

form zwitter ion ?

## A. $CH_3COOH$

## $\mathsf{B.}\,CH_3CH_2NH_2$

## $\mathsf{C}. \mathbb{C}l_3NO_2$

## D. $NH_2CH_2COOH$

#### Answer: D

## Watch Video Solution

**162.** Which amino acid is known as C-terminal residue in alanylglycylphenylalanine ?

A. Alanine

B. Glycine

C. Phenyl alanine

D. None

Answer: D

Watch Video Solution

163. The polypeptide chains run parallel and

are held together by \_\_\_\_\_ bonds.

## A. Disulphide

- B. Covalent
- C. Co-ordination covalent bond
- D. None

Answer: A

Watch Video Solution

164. Essential amino acid is

## A. Valine

## B. Histidine

C. Methionine

D. All

### Answer: D

Watch Video Solution

**165.** In which carboxyl group is present as carboxylate ion and amino group is present as amonium ion. This dipolar ion is also known as

A. Twitter ion

B. Zwitter ion

C. Carboxeminium

D. All

Answer: B

Watch Video Solution

**166.** Which isn't true reason of denaturation of protein ?

A. Detergent

B. Change in pH

C. Increase in temperature

D. None

Answer: D

Watch Video Solution

167. Enzymes are

A. living organisms

B. complex nitrogenous substances
produced living cell
C. dead organisms
D. combination of carbohydrates and

amino acids

Answer: B

**168.** Which of the following enzymes hydrolyses triglycerides to fatty acids and glycerol?

- A. Amylase
- B. Maltase
- C. Lipase
- D. Pepsin

### Answer: C



**169.** Which of the following is proteolytic enzyme?

A. Insulin

B. Diatose

C. Adenine

D. Pepsin

Answer: D

**170.** The function of enzymes in the living system is to:

- A. transport oxygen
- B. Provide immuniy
- C. catalyse biochemical reactions
- D. provide energy

Answer: C

**171.** The enzyme pepsin hydrolyses

A. protein to amino acids

B. fats to fatty acids

C. polysaccharides to monosaccharides

D. glucose to ethyalcohol

Answer: A

**172.** The enzyme nitrogenase which is responsible for fixation of nitrogen contains the metal ion

A. Al

B. Fe

C. Co

D. Zn

#### Answer: B



**173.** Enzyme trypsin converts

A. starch into sugar

B. proteins into  $\alpha$ -amino acids

C. glucose into glycogen

D.  $\alpha$ -amino acids into proteins

Answer: B

174. The enzyme present in yeast is

A. Trypsin

B. Urease

C. Zymase

D. Alcohol dehydrogenase

Answer: C

175. The enzyme galactase present in liver is

responsible for the conversion of

- A. glucose to fructose
- B. galactose to glucose
- C. galactose to fructose
- D. fructose to glucose

#### Answer: B

176. The co-factor of enzyme is

A. a protein molecule

B. a non-protein molecule

C. a vitamin  $B_6$ 

D. a nucleotide

Answer: B



177. A biological catalyst is

A. an amino acid

B. an enzyme

C. a nitrogen molecule

D. a carbohydrate

Answer: B

Watch Video Solution

178. The main function of lipid is to construct

A. Cell membrane

B. DNA

C. RNA

D. Proteins

Answer: A

Watch Video Solution

179. Cell membrane is composed of

A. Wax

B. Triglyceride

C. Terpen

D. Phospholipids

#### Answer: D



### 180. Lanoline comes under the class

A. Waxes

- B. Phospholipids
- C. Steroids

## D. Eicosanoid

Answer: A

Watch Video Solution

## 181. Menthol is an example of

A. vitamin

B. Terpen

C. Eicosanoid

D. Steroids

#### Answer: B



# **182.** Which of the following helps to dilate blood vessels ?

- A. Protaglandins
- B. Thromboxanes
- C. Prostacyclins
- D. Leukotrienes





## **183.** Which of the following helps to dilate blood vessels ?

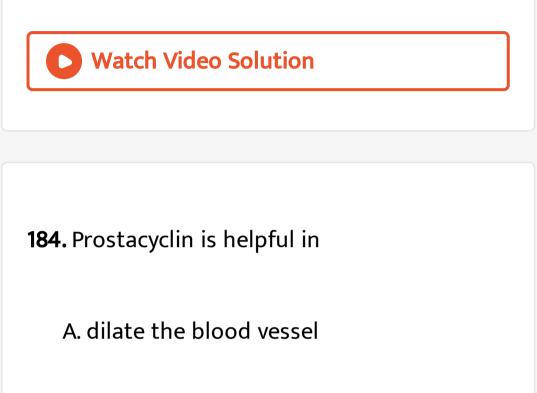
A. Oil

B. Vitamin

C. Insulin

D. Enzyme





- B. lower blood pressure
- C. make narrow the muscles of lung
- D. constructing cell membrane

Answer: A,B



### 185. Cholesterol is

- A. Enzyme
- B. Hormone
- C. Lipid
- D. Vitamin

#### Answer: C



186. Which of the following is NOT female sex

hormone?

A. Estrogen

**B.** Progesterone

C. Oxytocin

D. Testosterone

#### Answer: D

187. Cortisone is

- A. Steroid
- B. Protein
- C. Ester
- D. Vitamin

Answer: A



**188.** Aldosterone regulate

A. blood pressure

B. menstrual cycle

C. secondary sex characters of female

D. implantation of fertilized egg

Answer: A

**189.** Which of the following is peptide hormone?

A. Thyroxine

B. Insulin

C. Estrogen

D. Cortisone

Answer: B

## 190. Epinephrine helps to

A. increase pulse rate

B. release milk from mammary gland

C. control glucose level

D. control balance of water

Answer: A



191. Insulin is secreted by

- A. Pituitary glands
- B. Ovary
- C. Pancreas
- D. Testes

Answer: C

Watch Video Solution

192. Estrone is also known as

A. Estradiol

## B. Cortisone

C. Epinephrine

D. Oxytocin

Answer: A

Watch Video Solution

**193.** Testosterone is

A. male sex hormone

B. female sex hormone

- C. male sex vitamin
- D. female sex vitamin

### Answer: A



# **194.** Control of reabsorption of water in kidney is done by

A. Insulin

B. Vasopressin

C. Thyroxine

D. Estrogen

## Answer: B



195. In metabolic process the maximum energy

is given by

A. Carbohydrates

**B.** Proteins

C. Vitamins

D. Fats

## Answer: A



196. Insulin is

A. Hormone

B. Antibiotic

C. Antiseptic

# D. Vitamin

Answer: A

Watch Video Solution

## 197. A terpene, caryophyllene is found in

A. oil of turpentine

B. oil of roses

C. oil of ginger

D. oil of cloves

### Answer: D



# **198.** Which of the following vitamins is calciferol ?

A. Vitamin D

- B. Vitamin B
- C. Vitamin C
- D. Vitamin K





## **199.** Deficiency of vitamin A causes

- A. Beri beri
- B. Scurvy
- C. Night blindness
- D. Sterility





# **200.** Vitamin A is called:

A. Ascorbic acid

B. Retinol

C. Calciferol

D. Tocoferol

Answer: B

201. Vitamin C is called

- A. Antioxidant
- B. Antisterility
- C. Antirichitic
- D. Antiscurvy

### Answer: D

202. Deficiency of vitamin D causes

- A. Loss of appetite
- B. Rickets
- C. Xerosis
- D. Night blindness

Answer: B



203. Vitamin E is

- A. Water soluble
- B. Alcohol soluble
- C. Ether soluble
- D. Fat soluble

Answer: D



204. Which of the following vitamin is present

in cod liver oil ?

A. C

 $\mathsf{B.}\,B_{12}$ 

 $\mathsf{C}.B_6$ 

D. A

Answer: D

# **205.** Which one of the following contains cobalt?

- A. Haemoglobin
- B. Chlorophyll
- C. Vitamin  $B_{12}$
- D. Vitamin C

Answer: C



206. Classification of vitamins is based on

A. Solubility

B. Density

C. Molar mass

D. Viscosity

Answer: A

207. Which of the following is water soluble ?

A. Vitamin E

- B. Vitamin K
- C. Vitamin C
- D. Vitamin D

Answer: C



208. Vitamin C is also known as

A. Acetic acid

- B. Ascorbic acid
- C. Benzoic acid
- D.  $\beta$ -naphthol

**Answer: B** 

**209.** Which of the following is fat soluble vitamin ?

A. Pyrodoxine

 $\mathsf{B.}\,B_{12}$ 

C. C

D. A

Answer: D

## 210. Major source of many vitamins is

- A. Fruit juice
- B. Honey
- C. Ghee
- D. Milk

Answer: D



## 211. Night blindness is caused in human due

to deficiency of vitamin

A. B

B.C

C. D

D. A

Answer: D

## 212. Riboflavin is also known as vitamin

## A. $B_1$

- $\mathsf{B}.\,B_2$
- $\mathsf{C}.\,B_6$
- D.  $B_{12}$

### Answer: B



**213.** Exposure of sunlight help to synthesize vitamin in body.

A. A

**B.** B

C. C

D. D

### Answer: D

214. Which of the following is also a vitamin?

A. Folic acid

- B. Adipic acid
- C. Oxalic acid
- D. Benzoic acid

Answer: A



**215.** Vitamin synthesized in our body from cholesterol is

A. A

B. D

C.  $B_{12}$ 

 $\mathsf{D}.\,B_6$ 

## **Answer: B**

216. The only water soluble vitamin that can be

stored in our body is

A.  $B_1$ 

- $\mathsf{B}.\,B_3$
- C.  $B_{12}$
- $\mathsf{D}.\,B_6$

### Answer: C



217. Vitamin C is also known as

- A. Tocopherol
- B. Calciferol
- C. Pyridoxine
- D. Ascorbic acid

Answer: D



218. Scurvy is the disease occur due to loss of

## vitamin

A. A

 $\mathsf{B.}\,B_{12}$ 

C. C

D. D

### Answer: C

**219.** Deficiency of \_\_\_\_\_\_ vitamin causes

convulsions.

A. Retinol

B. Ascorbic acid

C. Pyridoxin

D. *B*<sub>12</sub>

Answer: C

**220.** Deficiency of niacin causes disease.

A. Pellagra

B. Xerophthalmia

C. Osteomalacia

D. Rickets

Answer: A

**221.** Which of the following is not a vitamin ?

A. Retinol

- B. Eicosanoid
- C. Calciferol
- D. Pyridoxin

Answer: B



**222.**\_\_\_\_ vitamin help in utilisation of oxygen.

## A. $B_2$

- $\mathsf{B}.\,B_6$
- C.  $B_{12}$
- $\mathsf{D}.\,B_1$

## Answer: A



**223.** Which of the following is known as 'appetite vitamin'?

A.  $B_2$ 

 $\mathsf{B.}\,B_1$ 

C.  $B_{12}$ 

 $\mathsf{D}.\,B_6$ 

#### **Answer: B**

# **224.** vitamin contain $Co^{3+}$ ion

## A. $B_{12}$

 $\mathsf{B.}\,B_1$ 

 $\mathsf{C}.\,B_2$ 

 $\mathsf{D}.\,B_6$ 

#### Answer: A



## **225.** Vitamin $B_2$ is also known as

- A. Riboflavin
- B. Thiamine
- C. Nicotinamide
- D. Pyridoxine

#### Answer: A



# **226.** Haemorrhage disease caused by deficiency of\_\_\_\_\_ vitamin.

## A. Calciferol

- B. Phylloquinone
- C. Tocopherol
- D. Retinol

#### Answer: B

Watch Video Solution

## **227.** Which vitamin's source is yeast?

B. H

 $\mathsf{C}.\,B_6$ 

D. All

Answer: A,C

Watch Video Solution

## 228. Which of the following bases is present in

DNA?

A. Lysine

## B. Thymine

- C. Thiamine
- D. Uracil

## Answer: B

Watch Video Solution

## 229. Which of the following bases is not found

in DNA?

A. Adenine

## B. Thymine

C. Lysine

D. Guanine

## Answer: C

Watch Video Solution

## 230. The base adenine occurs in

A. DNA only

B. RNA only

- C. Protein
- D. DNA and RNA both

#### Answer: D



## 231. The molecule RNA is

A. very large

- B. greater than DNA
- C. equal to DNA

D. smaller than DNA

#### Answer: D

Watch Video Solution

**232.** The transfer of genetic information from one cell to the newly synthesised cell is done by

- A. DNA polymerase
- B. RNA polymerase

C. DNA

D. RNA

#### Answer: C



# **233.** Which base is found only in the nucleotides of RNA ?

A. Uracil

B. Guanine

## C. Cytosine

D. Adenine

#### Answer: A



## 234. The structure of DNA is

A. Linear

- B. Single helix
- C. Double helix

## D. Triple helix

## Answer: C

Watch Video Solution

## **235.** In nucleic acids, the sequence is

- A. base-phosphate-sugar
- B. sugar-base-phosphate
- C. base-sugar-phosphate
- D. phosphate-base-sugar





## 236. DNA means

- A. Deoxyribonucleic acid
- B. Adenine triphosphate
- C. Ribonucleic acid
- D. Polynucleotide

Answer: A



## 237. Nucleic acids contain sugar.

A. Hexose

B. Pentose

C. Tetrose

D. Triose

**Answer: B** 

**238.** Which of the following is component of nucleoside ?

A. Phosphate group

B. Protein group

C. Purine

D. Fat group

Answer: C

239. In RNA Adenine base is linked to the

- A. Thymine
- B. Uracil
- C. Guanine
- D. Cytocine

**Answer: B** 



240. Whichbase is not present in RNA

A. Thymine

B. Adenine

C. Uracil

D. Guanine

Answer: A

**241.** In the structure of DNA, -OH group from which carbon atom is absent compared to RNA

A. 2

B. 3

C. 4

D. 5

#### Answer: A



242. Which of the following heterocyclic base

of purine class ?

A. Uracil

B. Thymine

C. Guanine

D. Cytosine

Answer: C

**243.** The structural difference in thymine and uracil is, -H of the uracil is replaced by \_\_\_\_\_\_ in thymine

A. = O

- $B.-CH_3$
- C. NH
- $\mathsf{D.}\,=N-H$

#### **Answer: B**



# **244.** Which one of the following is not a constituent of RNA?

A. Ribose

B. Uracil

C. Thymine

D. Phosphate

Answer: C

245. DNA is a polymer of units of

- A. Sugars
- B. Ribose
- C. Amino acids
- D. Nucleotides

Answer: D



**246.** The sugar present in DNA is :

A. Deoxyribose

B. Ribulose

C. Glucose

D. Ribose

Answer: A



247. Which substance isn't formed by complete

hydrolysis of nucleic acid ?

A. Hexose sugar

B. Phosphoric acid

C. Hetrocyclic bases which contains

nitrogen element

D. Pentose sugar

Answer: A

248. Purine base is

A. G

B.C

C. T

D. U

Answer: A

**249.** Pyrimidine base is

A. C

B. T

C. U

D. All

Answer: D



**250.** A unit formed by attachment of a base to \_\_\_\_\_ position of sugar is known as nucleoside .

- A.  $C_1$
- $\mathsf{B.}\,C_2$
- $\mathsf{C.}\,C_3$
- D.  $C_4$

## Answer: A



**251.** Unit formed by attachment of which carbon of nucleoside to phosphate ion is known as nucleotide ?



- $\mathsf{B.}\,C_3$
- $\mathsf{C}.\,C_4$
- D.  $C_5$

#### Answer: D



252. Which purine bases are found in DNA?

A. Cytosine and Adenine

- B. Cytosine and guanine
- C. Adenine and guanine
- D. Adenine and thymine

Answer: C

**253.** Which is an essential constituent of a diet?

A. Starch

B. Glucose

C. Carbohydrate

D. Amino acids

Answer: C

## 254. The element not present in carbohydrate

is

A. C

**B.** H

C. N

D. o

Answer: C

**255.** Many carbohydrates are sweet because

A. They have covalent bonds

B. they produce sugar on hydrolysis

C. They have electrovalent bond

D. they have co-ordinate bond

Answer: B

256. Cellulose is a polymer of

A. ribose

B. fructose

C. glucose

D. sucrose

Answer: C

257. The molecular formula of hexasaccharide

is

A.  $C_{36}H_{62}O_{31}$ 

B.  $C_{36}H_{62}O_{21}$ 

C.  $C_{36}H_{72}O_{21}$ 

D.  $C_{36}H_{72}O_{31}$ 

Answer: A

**258.** How many water molecular are used during hydrolysis of tetrasaccharides ?

A. 1

B. 2

C. 3

D. 4

Answer: C



259. Equimolar quantity of glucose with phenyl

hydrazine gives

- A. Glucose phenyl hydrazine
- B. Glucose phenyl hydrazone
- C. Glucose oxime
- D. Glucosazone

#### Answer: B

**260.** Which one of the following is used to identify glucose?

A. Neutral  $FeCl_3$ 

B. Conc. HCl and  $ZnCl_2$ 

 $C. CHCl_3$  and KOH

D. Ammonical  $AgNO_3$ 

Answer: D

261. Which of the following carbohydrate is an

essential constituent of plant cell?

A. Starch

B. Sucrose

C. Cellulose

D. Maltose

Answer: C

## 262. Glucose contains

A. 4 hydroxy and 1 ketone group

B. 5 hydroxy and 1 aldehyde group

C. 4 hydroxy and 1 aldehyde group

D. 3 hydroxy and 1 aldehyde group

Answer: B

263. The commonest disaccharide has the

molecular formula

A.  $C_{10}H_{18}O_3$ 

B.  $C_{10}H_{20}O_{10}$ 

C.  $C_{11}H_{22}O_{11}$ 

D.  $C_{12}H_{22}O_{11}$ 

Answer: D

**264.** (i) Starch is a polymer of (ii) basic unit of

starch is

- A. Glucose
- B. Fructose
- C. Sucrose
- D. Ribulose

Answer: A



265. Invert sugar is an equimolar mixture of

A. optically inactive forms of sugar

B. equimolecular mixture of glucose and

fructose

C. mixture of glucose and fructose

D. a variety of cane sugar

#### Answer: B

**266.** The letter D in carbohydrates represent its .

A. its direct synthesis

- B. its dextrorotation
- C. its mutarotation
- D. its configuration

Answer: B

**267.** Starch and cellulose have same

A. molecular formula

B. molecular wens

C. empirical formula

D. structural formula

Answer: C

**268.** The number of  $sp^3$  and  $sp^2$  hybridized C -

atoms in glucose are respectively

A. 5 and 1

B. 1 and 5

C. 4 and 2

D. 2 and 4

Answer: A

**269.** Some statements are made below:

(1) Glucose is aldohexose

(2) Naturally occurring glucose is dextro rotatory

(3) Glucose contain three chiral centre.

(4) Glucose contain one  $1^0$  alcholic group and

four  $2^0$  alcholic group.

Among the above correct statement(s) is/are

A. 1 and 2

B. 3 and 4

C. 1,2 and 4

D. all are correct

#### Answer: C

Watch Video Solution

## 270. Which of the following is pectin?

A.  $(C_6 H_{12} O_6)_n$ 

B.  $(C_5 H_{10} O_5)_n$ 

 $\mathsf{C.} \left( C_6 H_{10} O_5 \right)_n$ 

D.  $(C_6 H_{12} O_5)_n$ 





**271.** On hydrolysis sucrose gives equimolar mixture of

A. dextro rotatory glucose and dextro rotatory fructose

B. dextro rotatory glucose and laevo

rotatory fructose

C. laevo	rotatory	glucose	and	dextro
rotatory fructose				
D. laevo	rotatory	glucose	and	laevo
rotatory fructose				
Answer: B				
<b>Watch Video Solution</b>				

272. In maltose, glycosidic linkage is present

between the two glucose units at positions

A. 1,2

B. 1,1

C. 1,3

D. 1,4

Answer: D

Watch Video Solution

273. Egg white is an example of

A. nucleoprotein

B. glycoprotein

C. lipoproteins

D. phosphoprotein

Answer: B

Watch Video Solution

**274.** Amino acids usually exist in the form of Zwitter ions. This mean that they consist of

A. the basic group  $-NH_3^+$  and the acidic group  $COO^-$ B. the basic group  $-NH_3^-$  and the acidic group -COOH

C. the basic group  $-COO^-$  and the acidic

group  $-NH_3^+$ 

D. (a) and (b)

Answer: C

**275.** Carbon terminal and nitrogen terminal in each polypeptide indicate

A. -CO and -NH group

B. teminal free -COOH and  $-NH_2$  group

C. -CO group and  $NH_3$ 

D.  $-CONH_2$  group

Answer: B

#### 276. Peptide linkage is

## A. -CO-NH.

- $\mathsf{B.}-CO-NH-$
- C. CO NH –
- $D.-CONH_2$

#### **Answer: B**



**277.** A peptide bond joins two amino acids together by.

A. C-O

B. C-H

C. N-S

D. C-N

Answer: D

**278.** Both amino group and carboxylic group are in ionised form in  $\alpha$  acid at pH

A. 3.5

B. 4

C. 7

D. 8.3

Answer: C

**279.** In peptide formation,  $-NH_2$  group of one molecule condenses with

A. -COOH group of same molecule

B. -COOH group of another molecule

C. -COCl group of another molecule

D.  $-NH_2$  group of another molecule

Answer: B

## 280. Proteins usually contains

A. C and H

B. C,H and N

C. C,H,N and O

D. C,H and O

Answer: C



281. A tripeptide contains

A. 3

B. 2

C. 6

D. 9

Answer: B

## Watch Video Solution

**282.** Some statements are given about proteins :

(1) They are polymers with high molecular

weights

(2) On hydrolysis yield a mixture of  $\alpha$ -amino acids

(3) In glycoproteins the prosthetic group is a carbohydrate

(4) Casein of milk is a simple protein

Among the above, the true statements are:

A. Only 1 and 3

B. Only 1 and 2

C. Only 1, 2 and 3

D. Only 3 and 4

#### Answer: C



# **283.** Cofactors (non-proteonic prosthetic groups) used to bond conjugated proteins are

- A. carbohydrates
- B. phosphoric acid
- C. iron pigments
- D. all of these





## 284. Denaturation of proteins

A. Amino acid

- B. Peptide linkage
- C. Secondary structure
- D. Primary structure

Answer: C



**285.** When protein is subjected to denaturation

A. the primary structure get affected

B. the secondary structure remains

unaffected

C. the tertiary structure remains unaffected

### unaffected

#### Answer: D



## 286. Which one of the following chemical units

is certainly to be found in enzymes ?

A. 
$$NH - C -$$
 $|| O$ 







#### Answer: A



287. Enzymes are

A. Minerals

B. Fatty acids

C. Proteins

D. Oil

#### Answer: C

Watch Video Solution

## **288.** The inhibitor for an enzyme is a

A. Co-factor

- B. Complex organic compound
- C. Non-metal ion
- D. Metal ion

#### Answer: D



**289.** Lipids contain which of the following functional groups ?

A. 
$$-OH, -Cl, -Br$$

$$\mathsf{B.}-Cl, -Br$$

 $\mathsf{C.}-CN,\ -OH,\ -Br$ 

## D. Do not contain any particular functional

group

#### Answer: D



## 290. The main function of triglyceride is

- A. to store energy
- B. to store protein
- C. to store carbohydrates

D. to store nucleic acids

Answer: A

Watch Video Solution

291. Hormones are

A. Chemical messengers

B. Enzymes

C. Digestive juices

D. Vitamins





## 292. Cholesterol is an example of

A. Zoosterols

- B. Phytosterol
- C. Mycosterols
- D. Glycerols

Answer: D



## 293. Which of the following statements about

vitamins  $B_{12}$  is incorrect ?

A. It occurs in plants

B. It is present in rain water

C. It is not a polymer

D. It has a cobalt atom

#### Answer: B





## **294.** Deficiency of vitamin *E* causes

A. Antifertility

B. Scurvy

C. Beri beri

D. Loss of appetite

#### Answer: A

295. Fat soluble vitamins are

A. Stomach

B. Liver

C. Intestine

D. Heart

Answer: B



296. Vitamin in the diet should be in

A. small amount

B. in bulk

C. very high concentration

D. nil

Answer: A

297. Cheap method of production of vitamin D

is

A. Sunlight

B. Cabbage

C. Milk

D. Water

Answer: A

# 298. Vitamins are derived

A. Lipids

**B.** Proteins

C. Carbohydrates

D. Enzymes

Answer: A

299. A sesquiterpene, abscisic acid contains

how many isoprene units?

A. Two

B. Three

C. Four

D. Five

**Answer: B** 

**300.** The pairs of bases in DNA are held

together by

A. Hydrogen bond

B. Ionic bond

C. Oxygen bond

D. Phosphate groups

Answer: A

**301.** Which of the following statements about the assembly of nucleotides in a molecule of deoxyribonucleic acid is correct?

- A. A pentose of one unit connects to a pentose
- B. A phosphate of one unit connects to a

pentose of another

C. A pentose of one unit connects to the

base of another

# D. A phosphate of one unit connects to

the base of another

**Answer: B** 

Watch Video Solution

302. Pyrimidine base present in RNA but not in

DNA :

A. Uracil

B. Cytosine

C. Thymine

D. Guanine

Answer: A



303. The function of DNA is

A. Synthesized sugar

B. Synthesize protein

C. Transmit genetic character

D. Synthesize fat

# Answer: C

Watch Video Solution

# **304.** In Ribose sugar the number of carbon atom in heterocycle are

A. 1

B. 2

C. 3

D. 4

#### Answer: D

Watch Video Solution

# 305. How many oxygen atoms are present in 2-

## deoxyribose

A. 4

B. 5

C. 3

D. 2

#### Answer: A

# Watch Video Solution

# **306.** Which of the following statement is not correct about DNA molecule?

# A. It has double helix structure

B. It serves as hereditary material

C. The two DNA strands are exactly similar

D. Its replication is called semi-consertive

mode of replication

Answer: C

Watch Video Solution

307. Which of the following tests is used to

detect protein ?

A. Mercury nitrates in nitric acid

B. Lassigne's test

C. Molisch's test

D. Oil in sulphuric acid

Answer: A



308. Which carbon is anomeric carbon in cyclic

structure of glucose?

A.  $C_1$ 

 $\mathsf{B.}\,C_2$ 

 $\mathsf{C.}\,C_3$ 

D.  $C_4$ 

### Answer: A



# 309. Which substance is produced by heating

sucrose at 486 K temperature ?

A. Sucralose

B. Elitem

# C. Caramel

D. Arneto

# Answer: C



# 310. What are the sweetness index of fructose,

glucose and lactose respecively

A. 741,73,16

B. 161,73,74

#### C. 167,41,73

D. 173,74,16

#### Answer: D



# **311.** Which sugar is dextrorotatory and

indicates mutarotation ?

A. Sucrose

B. Maltose

C. Both (a) and (b)

D. None

#### Answer: B



# **312.** Which sugar is not present in vegetable ?

- A. Glucose
- B. Sucrose
- C. Maltose

#### D. Lactose

#### Answer: D

# Watch Video Solution

# 313. Which of the following is true?

A.Coenzyme+Apoenzyme + Enzyme<br/>(Active)(Active)<br/>(Active)B.Coenzyme+Apoenzyme + Enzyme<br/>(Active)(Inactive)<br/>(Active)C.Coenzyme+Apoenzyme + Enzyme<br/>(Inactive)(Active)<br/>(Active)

D.

# 

Answer: D

Watch Video Solution

314. Structure of DNA is look alike

A. Spiral staircase

B. Double helix

C. Twisted rope

D. All

#### Answer: D

Watch Video Solution

# **315.** Which pairs of bases are true for linkage between two chain of polynucleotide ?

A. Adenine-Thymine

B. Adenine-Guanine

C. Guanine-Thymine

D. Adenine-Cytosine

Answer: A

Watch Video Solution

**316.** If a person bleeds by his gingiva, so what would youv suggest to eat to prevent the disease?

A. Vegetable oil

**B.** Citrus fruits

C. Cheese

D. Milk

#### Answer: B



**317.** One base present in central part of DNA, it's joined to another base with 3 hydrogen bond, so what is that base ?

B. G

C. T

D. U

Answer: B

Watch Video Solution

318. In structure of amylose a - D+ glucose

units are joined by \_\_\_\_\_ linkage?

A.  $C_1 - 0 - C - C_2$ 

B. 
$$C_1 - 0 - C - C_4$$

C. 
$$C_1 - 0 - C - C_3$$

D. 
$$C_1 - 0 - C - C_6$$

#### Answer: B

Watch Video Solution

**319.** In electric field the pH value at which amino acid doesn't migrate towards any electrode is called

A. Neutral point

B. Amphoteric point

C. Isoelectric point

D. All

Answer: C

Watch Video Solution

320. Cellulose consist of long chain of

A.  $\alpha$ -D+ glucose

B.  $\beta$ -D + glucose

C. Fructose

D. Both (a) and (b)

Answer: B

Watch Video Solution

321. Which of the following sentence is true or

false ?

(Symbol is true is T and False is F)

(i) Message for the synthesis of a specfic

protein is present in DNA

(ii) Cytocin base is derivatives of pyrimidine.

(iii)  $\beta$ -2-Deoxy ribose sugar present in DNA.

(iv) DNA is the exculusiely repsonsible for maintaining the identity of different species of organism upto 100 years.

A. TTFT

B. FTTF

C. FTFT

D. FFFF

Answer: B



**322.** P is responsible for heredity and P is formed by Q and R.

A. P = Chromosomes, Q = Protein, R=Nucleic

acid

B. P=Chromosomes, Q = Petrocine, R=

Nucleic acid

C. P = Nucleic acid, Q = Chromosomes, R

=Chromosomes

D. P= DNA, Q = Sugar, R=Adenine

### Answer: A

Watch Video Solution

# **323.** Complete hydrolysis of cellulose gives:

A. D-ribose

- B. D-glucose
- C. L-glucose
- D. D-fructose

#### Answer: B



**324.** The reason for double helical structure of DNA is the operation of:

A. dipole-dipole interaction

B. hydrogen bonding

C. electrostatic attractions

D. van der Waal's forces





# **325.** Which base is present in *RNA* but not in *DNA*?

A. Uracil

B. Thymine

C. Guanine

D. Cytosine

### Answer: A



**326.** Insulin production and its action in human body are responsible for the level of diabetes. This compound belongs to which of the following catefories:

- A. A co-enzyme
- B. An antibiotic
- C. An enzyme

D. A hormone

Answer: D

Watch Video Solution

# **327.** In both DNA and RNA, the heterocyclic

### base and phosphate ester linkages are at:

A.  $C'_5$  and  $C'_2$  respectively of the sugar

molecule

B.  $C'_2$  and  $C'_5$  respectively of the sugar

molecule

C.  $C'_1$  and  $C'_5$  respectively of the sugar

molecule

D.  $C'_5$  and  $C'_1$  respectively of the sugar

molecule

Answer: C

**328.** The term anomer of glucose refers to

A. isomers of glucose that differ in configurations at carbons one and four (C-1 and C - 4)
B. a mixture of (D)-glucose and (L)-glucose
C. enantiomers of glucose

D. isomers of glucose that differ in

configuration at carbon one (C-1)

Answer: D



## **329.** The Secondary structure of a proteins refers to ?

- A.  $\alpha$ -helical backbone
- B. hydrophobic interactions
- C. sequence of  $\alpha$ -amino acids
- D. fixed configuration of the polypeptide

backbone

### Answer: A



**330.** The two forms of `D-glucopyranose obtained from solution of D-glucose are known as:

A. isomers

B. anomers

C. epimers

D. enantiomers

## Answer: B



**331.** Cellulose upon acetylation with excess acetic anhydride/ $H_2SO_4$  (catalytic) gives cellulose triacetate whose structure is









## Answer: A



**332.** Among cellulose, poly (vinyl chloride), nylon and natural rubber, the polymer in which the intermolecular force of attraction is weakest is

A. nylon

B. poly (vinyl chloride)

C. cellulose

D. natural rubber

## Answer: D

Watch Video Solution

## 333. The carbohydrate presents in milk:

A. lactose

B. maltose

C. glucose

D. fructose





**334.** When raffinose undergoes hydrolysis, it gives rise to

- A. galactose + 2 molecules of fructose
- B. glucose + 2 molecules of galactose
- C. glucose, fructose and galactose
- D. fructose + sucrose





# **335.** The number of chiral carbon atoms in a glucose molecule is

A. 16

B. 8

C. 4

D. 2





## **336.** The following carbohydrate is said to be a tri-saccharide.

A. stachyose

B. sucrose

C. galactose

D. raffinose

### Answer: D



# **337.** By the process of hydrogenation, the following substance can be manufactured

A. cocunut oil

B. lipids

C. ghee

D. olein





338. Linoleic acid is

A.  $C_{15}H_{33}COOH$ 

 $\mathsf{B.}\,C_{15}H_{37}COOH$ 

 $\mathsf{C.}\,C_{16}H_{33}COOH$ 

D.  $C_{17}H_{31}COOH$ 

Answer: D



## 339. Raffinose is a

- A. monosaccharide
- B. disaccharide
- C. trisaccharide
- D. polysaccharide

Answer: C

**340.** Glucose on oxidation gives an acid, containing the chiral C-atoms, equal to

- A. 2
- B. 3
- C. 4
- D. 5

### Answer: C



341. Millon's test is used to detect

A. CONH linkage

B. ether linkage

C. phenolic -OH group

D. alcoholic -OH group

Answer: C

**342.** For phenolic -OH group the following test is used.

A. Silver mirror test

B. Iso-cyanide test

C. Millon test

D. lodoform test

Answer: C

**343.** Which of the following disaccharide?

A. Starch

B. Lactose

C. Ribulose

D. Glucose

**Answer: B** 

344. In foodstuffs, which of the following is

present with nitrogen?

A. Protein

B. Carbohydrates

C. Oils and fats

D. All of these

Answer: A

345. Which one of the following compound

contains nitrogen ?

A. Proteins

B. Carbohydrates

C. Oils

D. `

Answer: A

346. General formula for the carbohydrates is

A.  $C_n H_{2n} O_{2n+2}$ 

 $\mathsf{B.}\, C_x(H_2O)_x$ 

 $\mathsf{C.}\, C_x(H_2O)_{2x}$ 

D.  $C_x(H_2O)_y$ 

Answer: D

**347.** Why is chalk powder added after complete hydrolysis of starch?

A. To solidify glucose

B. To remove  $CaSO_4$ 

C. To neutralize starch

D. To neutralize  $H_2SO_4$ 

Answer: D

348. Protein and Biuret reagent after mixing

gives

A. white ppt

B. red violet colouration

C. green colouration

D. red green colouration

Answer: B

**349.** Glucose has\_\_\_\_ asymmetric carbon atom.

A. 3

B. 4

C. 5

D. 6

Answer: B

350.	Glucose	has	primary	hydroxyl
and secondary hydroxyl group.				
A.	2,4			
В.	4,2			
C.	1,4			
D.	4,1			

#### Answer: C

## **351.** Stachyose gives \_\_\_\_\_ monomer units on

hydrolysis.

A. 2

- B. 3
- C. 4
- D. 5

## **Answer: C**



352. Stachyose is

A. Dissacharides

**B.** Trisaccharides

C. Tetrasaccharides

D. Monosaccharides

Answer: C

353. Hardening of oil is done by

A. Hydrolysis

B. Hydration

C. Hydrogenation

D. Hydrohalogenation

Answer: C

354. Fats belong to which group ?

A. Acid

- B. Salt of acid
- C. Ester
- D. Alcohol

Answer: C



**355.** Which is the following is trisaccharide?

A. Galactose

B. Maltose

C. Raffinose

D. Stachyose

Answer: C

**356.** Oils are converted into fats by

A. Addition

- B. Dehydrogenation
- C. Hydrogenation
- D. Oxidation

Answer: C



**357.** Caesin of milk has\_\_\_\_ as the prosthetic

group.

A. Phosphoric acid

B. Phosphorous acid

C. Carbohydrates

D. Lipids

Answer: D

358. Glucose reacts with bromine water to

products :

A. Gluconic acid

B. Glucaric acid

C. Glucose oxime

D. Sorbitol

Answer: A

**359.** Solvent used for recrystallisation of glucose is

A. Methanol

B. Benzene

C. Ethanol

D. Dry ether

Answer: C

360. Which of the following long chain fatty

acid is not an unsaturated acid ?

A. Oleic acid

B. Linoleic acid

C. Stearic acid

D. Both (a) and (c)

Answer: C

361. Protein can be detected by

A. Fruity odour test

B. Xanthoproteic test

C. Litmus test

D. Carbylamine test

Answer: B

362. An example of a disaccharide made up of

two units of the same monosaccharides is

A. Sucrose

B. Maltose

C. Lactose

D. Raffinose

**Answer: B** 

**363.** The enzyme nitrogenase which is responsible for fixation of nitrogen contains the metal ion

A. Al

B. Fe

C. Co

D. Zn

### Answer: B



**364.** Millon's reagent is a mixture of

A.  $HgCl + HgCl_2$ 

B.  $HgNO_3 + Hg(NO_3)_2$ 

 $\mathsf{C}. HgNO_2 + Hg(NO_2)_2$ 

D.  $Hg_2(NO_3)_2 + Hg(NO_3)_2$ 

Answer: D



**365.** Deficiency of vitamin E causes

## A. Antifertility

- B. Scurvy
- C. Beri beri
- D. Loss of appetite

Answer: A

Watch Video Solution

366. Monosaccharides usually contains ......

carbon atoms.

# A. $C_3$ to $C_8$

## B. $C_1$ to $C_6$

C.  $C_4$ to $C_{10}$ 

D.  $C_5 {
m to} C_8$ 

#### Answer: A



367. Glucose on oxidation with bromine water

yields gluconic acid. This reaction confirms the

presence of

A. six carbon atoms linked in straight chain

B. secondary alcoholic group in glucose

C. aldehyde group in glucose

D. primary alcoholic group in glucose

Answer: C

Watch Video Solution

**368.** What is the combining ratio of glycerol and fatty acid when they combine to form triglyceride?

A. 3:4

B. 3:2

C. 1: 3

D. 1:2

Answer: C

Watch Video Solution

369. What type of sugar molecule is present in

DNA?

- A. D-3-deoxyribose
- B. D-ribose
- C. D-2-deoxyribose
- D. D-glucopyranose

Answer: C



## 370. A molecule of stachyose contains how

many carbon atoms?

A. 6

B. 12

C. 18

D. 24

Answer: D

Watch Video Solution

**Test Your Grasp** 

1. Haemoglobin protein contains co-factor

A. Mg

B. Fe

C. Ca

D. Zn

Answer: B



2. Proteins does not give reaction with

A. Million's reagent

B. Biuret test

C. Fehling's reaction

D. Protein

Answer: C



**3.** The polymer formed with same monosaccharide is called as

A. heteropolysaccharide

B. homopolysaccharide

C. oligosaccharide

D. protein

Answer: B

4. In peptide formation,  $-NH_2$  group of one

molecule condenses with

A. -COOH group of same molecule

B. -COOH group of another molecules

 ${\rm C.}-COCl$  group of another molecule

D.  $NH_2$  group of another molecules

Answer: B

5. Starch is a polymer of

A. glucose

B. fructose

C. Sucrose

D. galactose

Answer: A

6. Sucrose on hydrolysis gives:

A.  $\alpha$ -amino acid

B. only glucose

C. Oils and fats

D. glucose and fructose

Answer: D

7. In beri-beri

A. Vitamin A

B. Vitamin  $B_1$ 

C. Vitamin C

D. Vitamin D

Answer: B

8. Nucleotides are bonded in the sequence

A. base-phosphate-carbohydrates

B. base-carbohydrates-phosphate

C. carbohydrate-base-phosphate

D. phosphate-base-carbohydrate

Answer: B

**9.** Which of the following is plant protein ?

A. Haemoglobin

B. Chlorophyll

C. Albumin

D. Collagen

Answer: B

10. Compound containing both  $-NH_2$  and

-COOH groups are called

A. Acid

B. Base

C.  $\alpha$ -amino acid

D. Amino acids

Answer: D

11. The enzyme present in saliva is

A. Ptyalin

B. Lipase

C. Trysin

D. Insulin

Answer: A



12. Insulin is an example of

- A. derived protein
- B. Conjugated protein
- C. polysaccharide
- D. simple protein

Answer: B

Watch Video Solution

**13.** Oligosaccharides contain how many monosaccharde units?

A. 2 - 10

B.11 - 15

C. one

 $\mathsf{D.}\,2-15$ 

#### Answer: A



# 14. Which of the following is not conjugated

protein

A. Haemoglobin

B. Chlorophyll

C. Nucleoprotein

D. Albumin

Answer: D

Watch Video Solution

15. Carbohydrates are stored in human body

as the polysaccharide:

A. Sugar

B. Starch

C. Glycogen

D. Fat

Answer: C

Watch Video Solution

**16.** Deficiency of vitamin A result in :

A. Retarded growth

- B. Loss of appetite
- C. Sterility
- D. Skin diseases

## Answer: C

Watch Video Solution

## **17.** Which of the following is dextrose?

A. Fructose

B. Glucose

C. Sucrose

D. Starch

#### Answer: B



# **18.** Enzymes belong to which class of compounds?

A. Polysaccharides

B. Hydrocarbons

C. Polynitrogen

D. Polypeptides

#### Answer: D



## 19. The sweetest of all sugars is

A. Glucose

B. Fructose

C. Strach

D. Cane sugar

Answer: B

Watch Video Solution

**20.** Which of the following is used to obtain glucose from starch ?

A. dilute HCl under pressure

B. Alcoholic HCl

C. dilute  $H_2SO_4$  under pressure

D. both (a) and (c)

#### Answer: C

Watch Video Solution

## 21. Blood sugar has the following formula

A.  $C_{12}H_{22}O_{11}$ 

B.  $(C_6 H_{10} O_5)_n$ 

C.  $C_6 H_{12} O_6$ 

D.  $C_5 H_{10} O_5$ 





# **22.** Which of the following vitamins is related to sterol structure ?

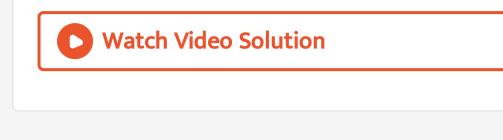
A. Vitamine E

B. vitamin B

C. Vitamin D

D. Vitamin A





## 23. Enzymes

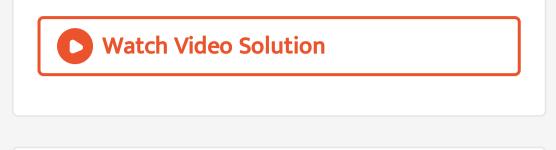
### A. consists of amino acids

B. have optium activity , at body

temperature q

- C. are carbohydrate
- D. have all these properties

#### Answer: B



**24.** Glucose is a / an

A. aldohexose having three asymmetric

carbon atoms

B. aldoketose having four asymmetric

carbon atoms

C. aldohexose having four asymmetric carbon atoms D. aldoketose having three asymmetric carbon atoms Answer: C Watch Video Solution

**25.** Which of the following is not found in carbohydrates ?

A. Carbon

B. hydrogen

C. Nitrogen

D. Oxygen

Answer: C

Watch Video Solution

26. Raffinose is an example of

A. Disaccharides

- B. Trisaccharide
- C. Monosaccharide
- D. Polysaccharide

### Answer: B

Watch Video Solution

27. Hairs contain

A. Fibrinogen

B. Keratin

C. Myosin

D. Amino acids

#### Answer: B

**Watch Video Solution** 

**28.** The polymer formed with different monosaccharide is called as

A. heteropolysaccharide

B. homopolysaccharide

C. disaccharide

D. trisaccharide

#### Answer: A



#### 29. Neutral amino acid contains

A. two- $NH_2$  and one -COOH group

B. one - $NH_2$  and one-COOH group

C. one- $NH_2$  and two -COOH groups

### D. two - $NH_2$ and two -COOH groups

#### Answer: B

Watch Video Solution

# **30.** Carbohydrates contains which of the following group ?

A. -CHO

B. > C = O

 $\mathsf{C}.-COOH$ 

D. both (a) and (b)

#### Answer: D

Watch Video Solution

## **31.** Which of the following is not sugar ?

A. Sucrose

B. Starch

C. Frcutose

D. Glucose

#### Answer: B



## 32. Fructose is

- A. Aldopentose
- B. Aldohexose
- C. Ketopentose
- D. Ketohexose

Answer: D



## 33. Oxidation product of glucose with bromine

water is \_\_\_\_\_.

A. Sorbitol

B. Gluconic acid

C. Glutamic acid

D. Saccharic acid

#### Answer: B





**34.** Haemoglobin is the example of

A. Simple protein

B. Derived protein

C. fibrous protein

D. Conjugated protein

Answer: D

35. The enzymes which can be hydrolyse starch

to glucose is

A. Maltase

B. Amylase

C. Diastase

D. Invertase

Answer: B

36. The most common cerebrosides are

A. Galactose

B. N/A

C. Galactocerebrosides

D. Glycerols

Answer: C

Watch Video Solution

37. The fatty acids in triacyl glycerols contain

A. an even number of carbon atoms and an

unbranched carbon chain

B. an odd number of carbon atoms and an

unbranched carbon chain

C. an even number of carbon atoms and a

branched carbon chain

D. an odd number of carbon atoms and a

branched carbon chain

Answer: A

# **38.** The part of the body organs where hormones are produced are called

A. Target

B. origin

C. Effectors

D. Duct glands

Answer: C

**39.** There are \_\_\_\_\_ types of RNA.

A. Two

B. Three

C. Four

D. Five

Answer: B



40. Simple lipids have

A. Glycoside linkages

B. Peptide linkages

C. Ester linkages

D. Hydrogen linkage

Answer: C