



### **CHEMISTRY**

# BOOKS - MBD CHEMISTRY (ODIA ENGLISH)

## BIOMOLECULES

**QUESTION BANK** 

1. Name two fibrous proteins.

#### 2. Deficiency of vitamin $B_2$ causes which

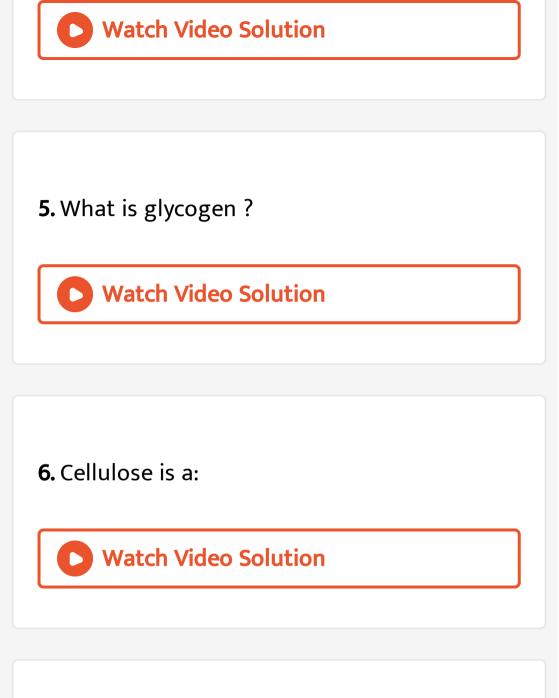
disease.



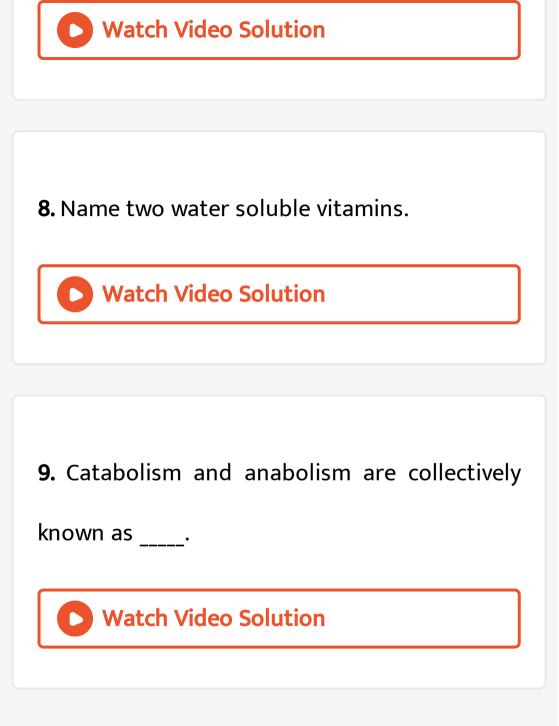
#### 3. Write two functions of protein.



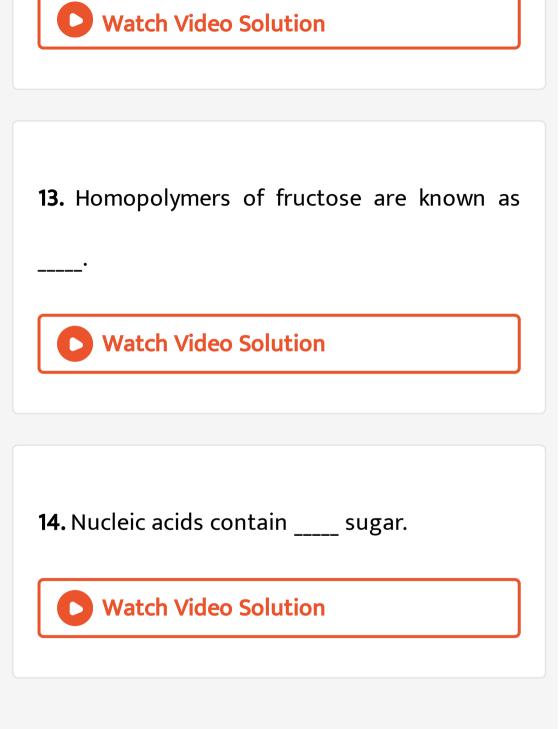
**4.** What are the sources of vitamin K?

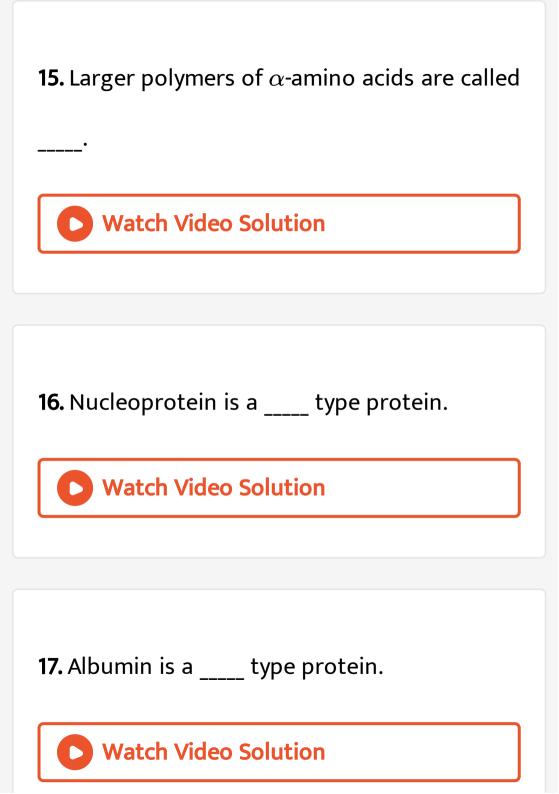


7. What is Zwitterion?



10. Catabolism and anabolism are collectively
known as
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<b>11.</b> acts as the centre of all activities of
the cell.
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<b>12.</b> Insulin is a homopolymer of





**18.** Keratin is a \_\_\_\_\_ type protein.

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19. Starch undergoes hydrolysis in presence of

mineral acids to give fructose.True/false

20. Glucose and fructose are chain isomers.TRUE/FALSE

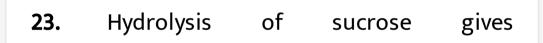
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21. Sucrose is used in silvering of mirrors.

(True/False)



22. Care sugar gives red color with Fehling.s solution.(True/False)
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glucose.TRUE/FALSE



**24.** Glucose is a ketohexose.TRUE/FALSE



**25.** Molisch's reagent may be used to distinguish between cane sugar and glucose solution.(True/False)

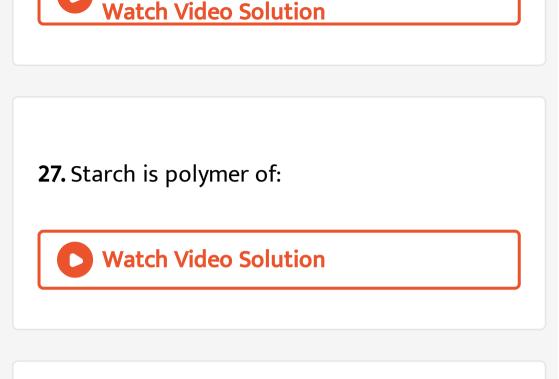
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26. The change in optical rotation with time of

freshly prepared solutions of sugar is known

as :





**28.** The function group which is found in amino acids is -COOH.TRUE/FALSE

29. Lack of vitamin B<sub>1</sub> causes scurvy.
(True/False)
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# **30.** Describe the double helical structure of DNA.



**31.** The enzyme which hydrolyses triglycerides to fatty acids and glycerol is called zymase. TRUE/FALSE

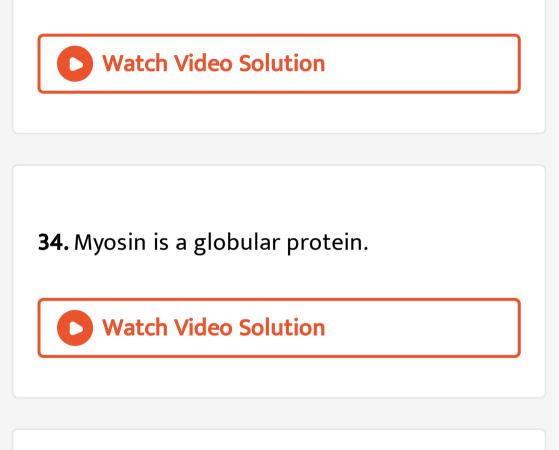


#### **32.** Helical structure of protein is stabilised by :

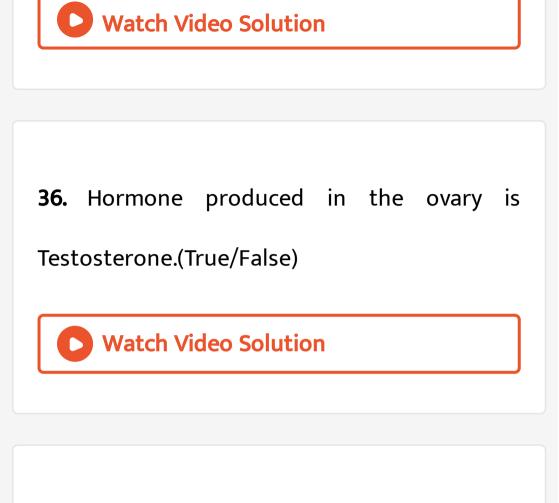


33. Amino acids which has phenolic -OH group

assist backbone is Leucine.TRUE/FALSE

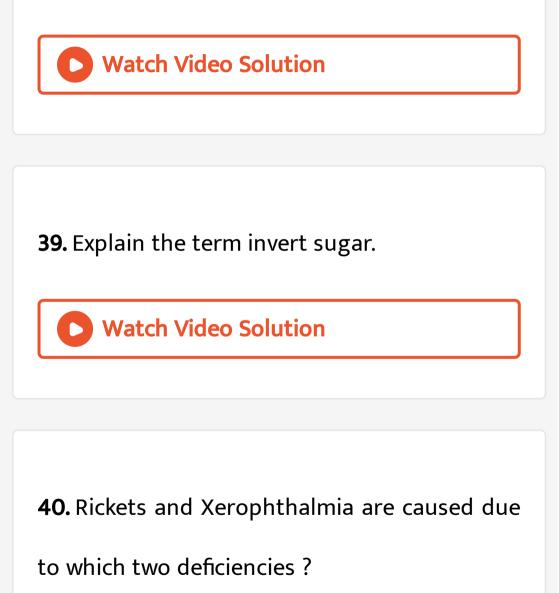


**35.** Thymine is present in RNA but not in DNA.SAY TRUE/FALSE



**37.** What is polypeptide ?

**38.** Give an example of denatured protein.



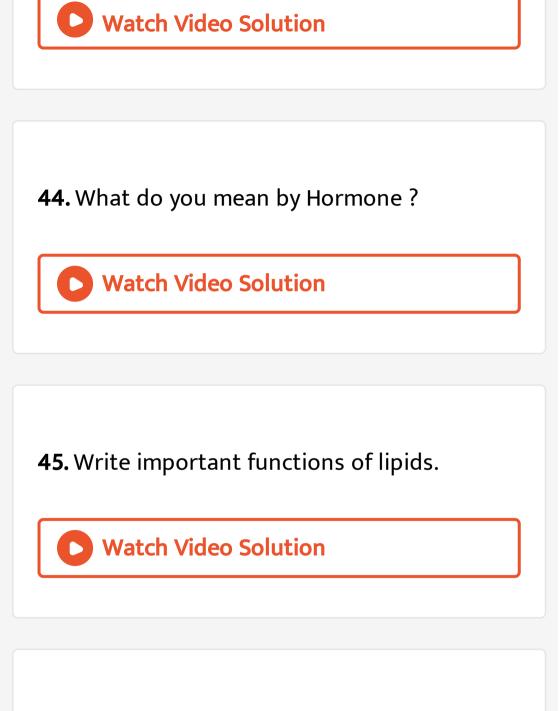
**41.** What is biofuel ?

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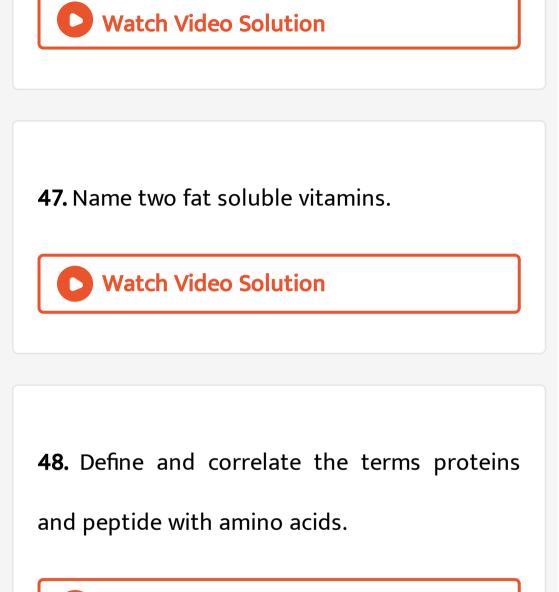
**42.** Write the difference between reducing sugar and non-reducing sugar.



**43.** Give two functions of mitochondria.



46. Give a brief idea about insulin.





49. How are sugar classified based on reducing

nature of carbohydrates ?

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50. How proteins are classified depending on

their three dimensional shape ?

51. How proteins are classified on the basis of

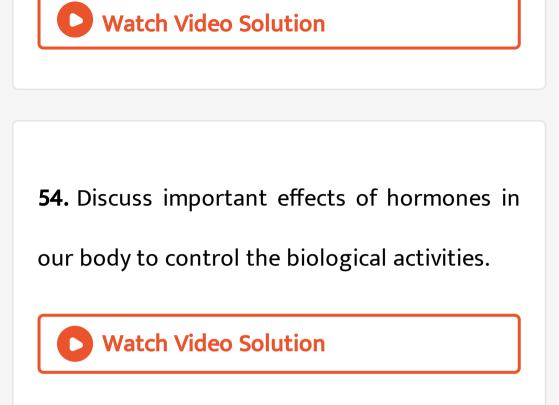
structure?

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**52.** Write important biological functions of Protein.

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53. Write important functions of lipids.



55. What are carbohydrates ? How are they

classified ? Give examples of each type.



56. Define and correlate the terms proteins

and peptide with amino acids.



57. How are sugar classified based on reducing

nature of carbohydrates ?

58. How proteins are classified depending on

their three dimensional shape ?



**59.** Write important biological functions of Protein.



60. What are lipids ?

Γ



**61.** What are enzymes ? Illustrate their functions.

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62. Discuss important effects of hormones in

our body to control the biological activities.



63. Discuss the classification and functions of

vitamins.



#### 64. What are nucleic acids? Write the

functions of nucleic acids ?

**65.** Which of the following is a monosaccharide ?

A. Glucose

B. Fructose

C. Arabinose

D. Galactose

Answer: C

66. Starch on hydrolysis by a dilute inorganic

mineral acid gives :

A. Sucrose

B. Glucose

C. Fructose

D. Maltose

Answer: D

**67.** Glucose will show mutarotation when solvent is :

A. Acidic

B. Basic

C. Neutral

D. Amphoteric

Answer: D

**68.** Which is used for making rayon (artificial silk) :

A. Starch

B. Cellulose

C. Terephthalic acid

D. Adipic acid

Answer: B

69. The disaccharide having two glucose units

is :

A. Lactose

B. Maltose

C. Sucrose

D. Ribose

Answer: B

70. Molisch's test is made for the detection of :

A. Alkyl halide

B. Carbohydrate

C. Alkaloid

D. Fat

Answer: B



71. After digestion, starch is converted into:

#### A. Glucose

**B.** Fructose

C. Lactose

D. Sucrose

Answer: A

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72. Osazone formation involves only 2 carbon

atoms of glucose because of :

#### A. Chelation

- **B.** Oxidation
- C. Reduction
- D. Hydrolysis

#### Answer: B



73. The number of asymmetric carbon atoms

in fructose are :

A. 2

B. 3

C. 4

D. 5

Answer: B

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# **74.** Describe the preparation of ether by williamson synthesis.

- A. Glucose and lactose
- B. Glucose and fructose
- C. Glucose and arabinose
- D. Glucose and maltose

Answer: B

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**75.** Milk changes after digestion into :

A. Cellulose

B. Fructose

C. Glucose

D. Lactose

Answer: C

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76. Glucose and fructose :

A. Are isomeric compounds

B. Are polyhydroxy compounds

C. Shows epimerization

D. All

#### Answer: D



77. The number of asymmetric carbon atoms in

a molecule of glucose is:

A. 1

B. 2

C. 4

D. 6

## Answer: C



# **78.** The total number of C atoms in $\beta$ -D fructofuranose are :

A. 6

B. 5

C. 4

D. 7

#### Answer: A



79. Glucose reacts with acetyl chloride to form

pentaacetyl glucose, it indicates presence of :

A. Five primary alcoholic groups

B. Five secondary alcoholic groups

C. Aldehyde as well as alcoholic group

D. Five -OH groups

#### Answer: D

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**80.** Glucose when heated with  $CH_3OH$  in presence of dry HCl gas  $\alpha$ - and  $\beta$ - methyl glycosides are formed . This is because it contains :

A. An aldehydic group

B.  $-CH_2OH$  group

C. A ring structure

D. Five hydroxyl groups

Answer: C

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**81.** Ribose sugar is a component of :

## A. DNA

B. RNA

C. Glucose

D. Wax

Answer: B

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# 82. Glucose with excess of phenylhydrazine

from :

A. Fructosazone

B. Glucose phenyl hydrazone

C. Glucosazone

D. Phenyl hydrazone of glucosazone

Answer: C

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**83.** Which molecule possess the general formula of carbohydrates, but is not a carbohydrate :

- A. Glyceraldehydes
- B. Arabinose
- C. Acetic acid
- D. All

## Answer: C



84. An aldose is converted into its next higher

homologue by :

- A. Ruff.s method
- B. Amadori rearrangement
- C. Kiliani synthesis
- D. None

Answer: C



85. Fructose is prepared commercially by ...... a

polysaccharide which occurs in dahlia tubers

and Jerusalem artichokes :

A. Inulin

B. Cellulose

C. Lactose

D. None

Answer: A



86. When glucose reacts with bromine water,

the major product is :

- A. Gluconic acid
- B. Saccharin acid
- C. Sorbitol
- D. Galactose

## Answer: A



87. Blood sugar is the same as,

A. Fructose

## B. Galactose

C. Glucose

D. Glycogen

## Answer: C

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## 88. An essential constituent of plant is :

A. Cellulose

B. Glucose

C. Sugar

D. Raffinose

#### Answer: A



# 89. Which enzyme hydrolyses triglyceride to

fatty acids and glycerol

A. Amylase

B. Maltose

C. Lipase

D. Pepsin

## Answer: C



90. Cellulose is a:

A. Monosaccharide

B. Disaccharide

C. Polysaccharide

#### D. None

## Answer: C

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91. Which is not a reducing sugar :

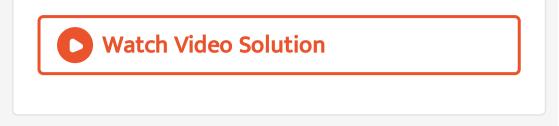
A. Fructose

B. Glucose

C. Lactose

D. Sucrose

## Answer: D



**92.** Saccharin, an artificial sweetener, is manufactured from

A. Hexose

B. Reducing sugar

C. Glucoside

D. None





# **93.** Common table sugar is more formally described as

A. Glucose

B. Lactose

C. Maltose

D. Sucrose

#### Answer: D



**94.** Sucrose is made up of :

- A. Glucopyranose and fructopyranose
- B. Glucofuranose and fructofuranose
- C. Glucopyranose and fructofuranose
- D. Glucopyranose and fructopyranose

Answer: B



95. Glycogen is :

A. A polysaccharide found in both animals

and plants

- B. Polysaccharide found in plants
- C. A polysaccharide found in animals
- D. A polysaccharide found in honey







96. Which is insoluble in water :

A. Glucose

B. Cellulose

C. Fructose

D. Sucrose

Answer: B

97. Which does not contain carbohydrate :

A. Cellulose

B. Wax

C. Starch

D. Wheat flour

Answer: B

**98.** Human digestive system does not hydrolyse :

A. Starch

B. Maltose

C. Glycogen

D. Cellulose

Answer: D

**99.** Solution of  $SO_2$  in water is known as:

A. specific rotation

**B.** Inversion

C. Rotatory motion

D. Mutarotation

Answer: B



100. Which differs from the rest :

## A. Glucose

- B. Maltose
- C. Sucrose
- D. Lactose

Answer: A



## 101. Lactose has the same molecular formula

as :

## A. Glucose

- B. Maltose
- C. Laevulose
- D. Galactose

#### Answer: B

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102.

Dihydroxyacetone

 $(CH_2OH.\ CO.\ CH_2OH)$  has the general

formula of carbohydrate but not included in

this class due to :

A. It does not contain polyhydroxy gp.

B. It does not contain aldehyde gp.

C. It is not optically active

D. All

Answer: C

**103.** The synthesis of carbohydrates in plants

is mainly due to :

A. Double decomposition

B. Photosynthesis

C. Hydrolysis of ingredients taken from soil

D. Nitrifying bacteria

Answer: B

104. Glucose may be converted into fructose

by:

A. Osazone formation

B. Lactone formation

C. Kiliani synthesis

D. None

Answer: A

**105.** The sugar present in fruits is :

A. Fructose

B. Glucose

C. Sucrose

D. Galactose

Answer: A

**106.** The acid used in soft drinks is:

A. Glucose

**B.** Fructose

C. cellulose

D. Aspartame

Answer: B

**107.** Pyranose structure of glucose is

A. Hexagonal

**B.** Pentagonal

C. Linear

D. Tetrahedral

Answer: D

**108.** The main sugar present in honey is :

A. Sucrose

B. Glucose

C. Fructose

D. Maltose

Answer: A



109. The polymer formed with more than two

monosaccharide unit is known as :

A. Disaccharide

B. Polysaccharide

C. Both (a) and (b)

D. None

Answer: B

110. Which of the following is laevorotatory :

A. Glucose

B. Fructose

C. Sucrose

D. None

Answer: B

**111.** The reaction of glucose with redP + HI is called :

A. Sandmeyer's reaction

B. Reformatsky reaction

C. Gattermann reaction

D. Reduction

Answer: D

112. The reagent used in Ruff degradation is :

A. Baeyer's reagent

B. Tollen's reagent

C. Fenton reagent

D. Benedict's reagent

Answer: C

113. A solution of d-glucose in water rotates

the plane polarised light :

A. To the right

B. to the left

C. To either side

D. None

Answer: A

### **114.** Raffinose is :

A. Monosaccharide

B. Disaccharide

C. Trisaccharide

D. None

Answer: C



**115.** The metal present in insulin is:

A. 51

B. 15

C. 25

D. 475

Answer: A



116. Which are not the essential constituents

of balanced diet:

A. Carbohydrates

B. Fats

C. Proteins

D. Hormones

Answer: D

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117. The hormone responsible for bolting is

A. Is secreted by pancreas

- B. Is secreted by thyroid
- C. Decreases blood sugar
- D. Does not stimulate metabolism

Answer: B

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118. Which one of the following proteins

transports oxygen in the blood stream:

# A. Myoglobin

B. Insulin

C. Albumin

D. Haemoglobin

Answer: D

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**119.** What do you mean by an asymmetric carbon?

# A. Histidine

- B. Glycine
- C.  $\alpha$ -alanin
- D. Threonin

Answer: B



**120.** Which one is a test for proteins:

A. Brillstein test

B. Biuret test

C. Benedict's test

D. Molisch's test

Answer: B

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**121.** The destruction of the biological nature and activity of proteins by heat or chemical agent is called:

- A. Dehydration
- **B.** Denaturation
- C. Denitrogenation
- D. Deamination

#### **Answer: B**



## 122. Which of the following molecules contain

asymmetric carbon atom ?

- A. Carbohydrates
- **B.** Proteins
- C. Oils and fats
- D. Waxes

#### Answer: B



**123.** Which of the following is not a protein:

## A. Wool

B. Nail

C. Enzyme

D. Nucleoside

Answer: D

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124. Kwashiorkar is caused by the deficiency of:

A. Vitamins

B. Hormones

## C. Amino acids

D. Essential amino acids

### Answer: C

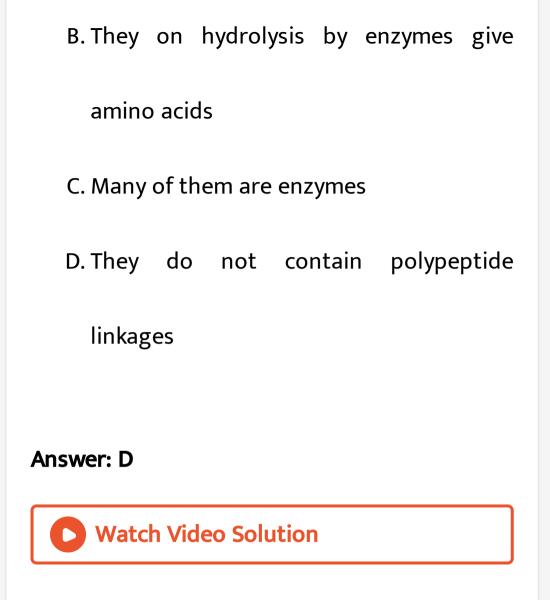


# 125. Point out of the wrong statement about

proteins:

A. They are nitrogenous organic

compounds of high molecular mass



126. Secondary structure of proteins refers to:

A. Mainly denatured proteins and structure

### of prosthetic group

B. Three dimensional structure specially

the bond between amino acid residues

that are distant from each other in

polypeptide chain

C. Linear sequence of amino acid residue in

the polypeptide chain

D. Regular folding patterns of continuous

portion of the polypeptide chain





127. Ascorbic acid is:

A. Vitamins C

B. Enzyme

C. Proteins

D. Lipid

Answer: A



**128.** The organic compounds of high physiological importance which are essential in small amounts for the well being of all human beings are:

A. Proteins

**B. Vitamins** 

C. Mineral salts

D. Enzymes





129. Vitamin A is also known as:

A. Xerophythol

B. Thiamine

C. Riboflavin

D. Pyridoxine

Answer: A



# **130.** Deoxyribonucleic acid (DNA) is a polymer

of units called:

A. Sugars

B. Ribose

C. Amino acids

D. Nucleosides

### Answer: D





**131.** Vitamin C deficiency may cause:

A. Beriberi

**B.** Rickets

C. Night blindness

D. Teeth & scurvy disease

Answer: D

**132.** The antisterility or anti reproductive vitamin is:

A. B

B.C

C. D

D. E

### Answer: D

**133.** Aqueous solution of which carbohydrate give a dark blue colour with a few drops of iodine solution

- A.  $B_1$
- $\mathsf{B}.\,B_2$
- $\mathsf{C}.\,B_6$
- D.  $B_{12}$

### Answer: D

**134.** Which is fat soluble vitamin:

A. Vitamin A

B. Pyridoxine

C. Riboflavin

D. Thiamine

Answer: A



135. Citrus fruits are an important source of

vitamin:

A. B

B.C

C. D

D. K

**Answer: B** 

136. Which one of the following compounds is

not a vitamin:

A. Ascorbic acid

B. Thiamine

C. Testosterone

D. Riboflavin

Answer: C

137. Which vitamin contains N:

A. Vitamin A

B. Vitamin C

C. Vitamin B

D. Vitamin D

Answer: C

138. The chemical messenger produced in the

endocrine (duct-less) glands are grouped as:

A. Polypeptides

B. Hormones

C. Bile salts

D. Purines

Answer: B

### **139.** Vitamin D is also known as:

A. Growth vitamin

B. Ascorbic acid

C. Reproductive vitamin

D. Sunshine vitamin

Answer: D

140. Which of the following vitamins contains

### isoprene unit:

A. A

B.C

 $\mathsf{C}.\,B_2$ 

D. D

#### Answer: A

141. Nucleotides and nucleosides mainly differ

from each other in :

A. Presence of phosphate units

B. Presence of base units

C. Presence of nucleic acids

D. None

Answer: A

142. Vitamin which is believed to cure common

cold is :

A. A

B.C

C. K

D. E

**Answer: B** 

143. Which of the following vitamins is present

### in cod-liver oil:

A. A

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

 $\mathsf{C}.\,B_1$ 

 $\mathsf{D.}\, C$ 

Answer: A



**144.** The vitamin that is most readily manufactured in our bodies is :

A. Vitamin A

B. Vitamin B

C. Vitamin C

D. Vitamin D

Answer: D

145. An example of a water soluble vitamin is :

A. Vitamin

B. Vitamin C

C. Vitamin D

D. Vitamin E

Answer: B



146. Deficiency of vitamin E causes:

A. Sterility

**B.** Rickets

C. Beri-Beri

D. Scurvy

Answer: A



**147.** The vitamin which is water soluble and antioxidant is :

A. Vitamin E

B. Vitamin D

C. Vitamin C

D. Vitamin  $B_1$ 

Answer: C

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**148.** A vitamin which plays a vital role in the coagulating property of blood is :

A. Vitamin A

B. Vitamin D

C. Vitamin E

D. Vitamin K

Answer: D

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149. Scurvy is caused due to deficiency of :

A. Vitamin  $B_1$ 

B. Vitamin  $B_2$ 

C. Ascorbic acid

D. Glutamic acid

Answer: C

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150. Beri-Beri is caused due to :

A. Vitamin A

B. Vitamin  $B_1$ 

C. Vitamin C

D. Vitamin D

#### Answer: B



# 151. Which one of the following vitamins

deficiency causes rickets:

A. Vitamin A

B. Vitamin B

C. Vitamin C

D. Vitamin D

### Answer: D



# **152.** Which one of the following vitamins

contains a metal atom:

A. Riboflavin

B. Vitamin  $B_{12}$ 

C. Vitamin A

D. Vitamin $B_6$ 

### Answer: B



153. Vitamin C is a :

A. Alcohol

B. Amide

C. Amine

## D. Lactone

Answer: A

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# **154.** Vitamin $B_1$ is chemically known as :

A. Ascorbic acid

B. Riboflavin

C. Pyridoxine

D. Thiamine

### Answer: D



**155.** Deficiency of which vitamin can cause night blindness an eye disease:

A. Vitamin $B_6$ 

B. Vitamin C

C. Vitamin  $B_{12}$ 

D. Vitamin A





# **156.** Which enzyme hydrolyses triglyceride to fatty acids and glycerol

A. Amylase

B. Maltase

C. Lipase

D. Pepsin





# **157.** Which is not a poison for enzymes:

- A.  $CN^{-}$
- $\mathsf{B.}\,Fe^{3\,+}$
- $\mathsf{C.}\, Pb^{2\,+}$

D. 
$$As_4^{3\,-}$$

**Answer: B** 



# **158.** Which vitamin is present is Golden Rice ?

A. fish Liver oil

B. Milk

C. butter

D. All

## Answer: D

159. Which of the following contains vitamin D:

A. Calciferol

B. Keratin

C. Tocopherol

D. None

**Answer: A** 

160. ..... is the precursor of vitamin-A.

A. Beans

B. Wheat

C. Carrots

D. Oranges

Answer: C



**161.** Which of the following is a vitamin:

A. Riboflavin

B. Thyroxine

C. Adrenaline

D. Guanine

Answer: A

**162.** Which of the following hormones helps in the conversion of glucose into glycogen in the body:

A. Insulin

B. Cortisone

C. Thyroxin

D. Oxytocin

Answer: A

163. A substance which completely destroys or

reduces the activity of the catalyst is called:

A. Catalysts

**B.** Inhibitors

C. Co-enzymes

D. Epimers

Answer: C

164. The substance constituting more than

80~% of cell contents is :

A. Protein

B. Mineral

C. Fat

D. Water

Answer: D

**165.** The hormone thyroxine:

A. Quick digestion

B. Slow heartbeat

C. Either of these

D. None of these

Answer: D

166. The conversion of glucose into glycogen

in liver is called:

A. Glycogenolysis

B. Glycogenesis

C. Glycolysis

D. Gluconeogenesis

#### Answer: B

167. Prolonged deficiency of nicotinic acid

(niacin) in human diet leads to:

A. Beri-Beri

B. Pellagra

C. Scurvy

D. Anaemia

Answer: B

168. The Ph of stomach is:

A. 7

B. 6

C. 10

D. 2

Answer: D



169. The energy stored in the cells of a living

body is in the form of:

A. Fats

B. Glucose

C. ATP

D. Proteins

Answer: C

**170.** Element found in plant systems which forms an important constituent of photosynthesis is:

A. Iron

B. Copper

C. Vitamins

D. Sodium

Answer: C

**171.** Which of the following disease is a STD?

A. Epilepsy

B. AIDS

C. Color blindness

D. Leucoderma

Answer: C

172. The principal buffer present in the blood

is:

# A. $CH_3COONH_4$

# $\mathsf{B.}\,CH_3COOH\,/\,CH_3COONa$

 $\mathsf{C}.\,H_2CO_3\,/\,HCO_3^{\,-}$ 

D.  $NaH_2PO_4Na_2HP_4$ 

#### Answer: C

173. The cells having membrane bound nucleus

are called:

A. Eukaryotic

B. Prokaryotic

C. Plant tissue cell

D. Animal tissue cell

Answer: A

174. Artificial gene was first synthesised by:

A. Khorana

- B. Watson and Crick
- C. Chargaff
- D. Wilkins

Answer: A



**175.** Which of the following is a female sex hormone:

A. Adrenaline

B. Estrone

C. Cortisone

D. Testosterone

Answer: B

176. Hydrolysis of adenosine triphosphate,

involves rupture of:

A. Base-sugar bond

B. Sugar-phosphate bond

C. P-O-P bond

D. Consumption of the whole molecule

Answer: C

**177.** Oxygen balance in the atmosphere maintained through the process of:

A. Photosynthesis

B. Protein synthesis

C. Amino acid synthesis

D. Fat synthesis

Answer: A

178. Universal recipient in blood transfusion

belongs to the group:

A. Adrenaline

B. B

C. AB

D. 0

Answer: C

179. What are the end products of respiration:

A. Glucose $+CO_2$ 

B. Glucose  $+O_2$ 

 $\mathsf{C}.\,H_2O+CO_2$ 

 $\mathsf{D.}\, CO_2 + O_2$ 

Answer: C

**180.** Blood transports:

A. Oxygen

B. Carbon dioxide

C. Oxygen and carbon dioxide

D. None of the above

Answer: C

181. Which of the following is a genetic trait in

man:

A. Albinism

B. Leucoderma

C. Tuberculosis

D. Diphtheria

Answer: A

**182.** In which of the following steps largest

number of ATP are produced :

A. Glycolysis

B. Kreb's cycle

C. Hydrolysis

D. Terminal respiratory chain

Answer: B

183. The 'Y' shaped protein molecules involved

in the immune system are called:

A. Antigen

B. Immunoglobulin

C. Pathogens

D. None of the above

#### Answer: B

**184.** Haemophilia is a disease caused by deficiency of:

A. RBCs

B. WBCs

C. Thromboplastin

D. Water in plasma

Answer: C

**185.** Carbohydrates have the general formula  $C_X(H_2O)_Y$ . Which of the following is not a carbohydrate:

A.  $C_6H_{16}O_6$ 

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

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

D.  $C_2H_4O_2$ 

#### Answer: D



**186.** The general formula of carbohydrates is:

A.  $C_n H_{2n+1} O$ 

 $\mathsf{B.}\, C_n H_2 n O$ 

C.  $C_n(H_2O)_n$  or  $C_x(H_2O)_y$ 

D.  $C_n(H_2O)_2n$ 

Answer: C

**187.** Carbohydrates are commonly found as starch in plant storage organ . Which of the following five properties of starch (i-v) make it useful as a storage material ? (i) easily translocated (ii) chemically non-reactive (iii)easily digested by animals (iv) osmotically inactive (v) synthesized during photosynthesis The useful properties-are:

A. Hydrates of carbon

B. Polyhydroxy aldehydes or, ketones

C. Polyhydroxy acids

D. None

Answer: B

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**188.** Many of the carbohydrates are sweet in taste because of:

A. They give sugars on hydrolysis

B. Covalent bonding

C. Electrovalent bonding

D. Coordinate bonding

Answer: A

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**189.** Which carbohydrate is as important as steel and is employed in manufacture of many articles in daily use as well as most abundant in nature:

A. Cellulose

B. Glucose

C. Starch

D. Sucrose

Answer: A

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190. Carbohydrate contains

A. -OH

B.-CHO

$$\mathsf{C.} > C = O$$

D. All

#### Answer: D



**191.** Aqueous solution of which carbohydrate

give a dark blue colour with a few drops of iodine solution

A. Sucrose

B. Starch

C. Glucose

D. Fructose

Answer: B

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**192.** Aqueous solution of carbohydrate with 2 drops of alcoholic solution of  $\alpha$ -napthol and  $H_2SO_4$  gives a ring at the junction . The colour of the ring is

A. Yellow

B. Green

C. Violet

D. Red

Answer: C

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**193.** Which reagent is used for detection of sugar in urine

- A. Baeyer's agent
- B. Tollen's agent
- C. Fehling's agent
- D. Bendict's agent

#### Answer: C



194. Starch can be used as an indicator for the

detection of the traces of

A. Glucose in aqueous solution

B. Proteins in blood

C. lodine in aqueous solution

D. Urea in blood

Answer: C

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**195.** Glucose cannot be classified as:

A. A hexone

B. A carbohydrate

C. An oligosaccharide

D. An aldose

Answer: C

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# 196. On heating with conc. $H_2SO_4$ sucrose

gives:

A. CO and  $CO_2$ 

B. CO and  $SO_2$ 

## $\mathsf{C.}\, CO,\, CO_2 \mathsf{and}\, SO_2$

D. None of the above

### Answer: D

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## 197. The letter D in carbohydrates represents

A. Its direct synthesis

B. Its dextrorotation

C. Its mutarotation

D. It configuration

### Answer: D



198. Glucose reacts with methyl alcohol to give

A.  $\alpha$ -methyl glucopyrnoside

B.  $\beta$ -methyl glucopyrnoside

C. Both (a) and (b)

#### D. None

### Answer: C

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199. The epimer of glucose is

A. Galactose

**B.** Fructose

C. Mannose

D. Arabinose





## **200.** $\alpha$ -glucose and $\beta$ -glucose are

A. Isomers

**B.** Anomers

C. Epimers

D. Tautomers

Answer: B



## 201. Glucose is

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

Answer: A

202. Fructose contains

A. 50H groups

## B. 3 secondary alcoholic groups

C.2 primary alcoholic group and one

ketonic group

D. All

Answer: D

**203.** Which of the following is a disaccharide:

A. Sucrose

B. Glucose

C. Fructose

D. Starch

Answer: A



**204.** Cane sugar on hydrolysis yields:

- A. Glucose and maltose
- B. Glucose and lactose
- C. Glucose and fructose
- D. Only glucose

Answer: C

**205.** Glucose gives the silver mirror test with ammoniacal solution of silver nitrate because it contains :

A. Aldehyde group

B. Ester group

C. Ketone group

D. Amide group

Answer: A

**206.** Glucose and fructose are :

A. Chain isomers

**B.** Position isomers

C. Functional isomers

D. Optical isomers

Answer: C

**207.** Glucose and fructose differ in :

A. Taste

B. Action of heat

C. Action of Tollen's reagent

D. Direction of optical rotation

Answer: D

208. Direct conversation of starch into glucose

may be carried out by:

A. Fermentation with diastase

B. Fermentation with zymase

C. Heating it with dil.  $H_2SO_4$ 

D. Fermentation with maltose

Answer: C

209. Which is sweet among known sugars,

A. Sucrose

B. Fructose

C. Glucose

D. Lactose

**Answer: B** 

210. The ultimate product of the hydrolysis of

starch is :

A. Glucose

**B.** Fructose

C. Sucrose

D. None

Answer: A

211. Glucose and fructose are readily

distinguished by using :

A. Molisch test

B. Saliwanoff test

C. Tollen.s reagent

D. None of these

Answer: B

212. Identify the product Z in the following

:

series of reactions  $C_6H_{12}O_6 \xrightarrow{HCN} X \xrightarrow{H_2O} Y \xrightarrow{HI} Z$ 

A. Hexanoic acid

B.  $\alpha$ -methyl caproic acid

C. Heptanoic acid

D. None of these

Answer: C

**213.** Invert sugar is :

A. Chemically inactive form of sugar

B. Equimolar mixture of glucose and

fructose

C. Mixture of glucose and sucrose

D. A variety of cane sugar

#### Answer: B

**214.** Milk sugar is ( a disaccharide):

A. Sucrose

B. Lactose

C. Fructose

D. Glucose

Answer: B



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**215.** Which of the following is a ketohexose:

## A. Glucose

- **B.** Fructose
- C. Sucrose
- D. Starch

Answer: C



216. The reagent used to distinguish between

starch and sugar solution is:

A. Ammoniacal silver nitrate

- B. Fehling's solution
- C. Benedict's solution
- D. Iodine solution

Answer: A

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217. Starch is polymer of:

A. Fructose

B. Glucose

C. Lactose

D. None

Answer: B

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**218.** When sucrose is heated with Fehling's solution, the product formed is:

A. Saccharic acid

B. Oxalic acid

C. Formic acid

D. Invert sugar

Answer: D

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**219.** Which does not react with Fehling.s solution:

A. Acetaldehyde

B. Benzaldehyde

C. Glucose

D. Formic acid

Answer: B

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**220.** Starch is changed into disaccharides in presence of:

A. Diastage

B. Maltase

C. Lactase

D. Zymase

#### Answer: C

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## 221. Glucose is hydrolysed by zymase into:

A. Dicarboxylic acid

B. Alcohol

C. Amino acids

D. Aromatic acids

#### Answer: C



222. How are you able to test sugar in a given

sample of wine:

A. By Molisch's test

B. By Dunstan's test

C. By Biuret's test

D. By Legal's test

#### Answer: B

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### 223. which carbohydrate serves as reserve

glucose in body?

224. Acetyl derivative of which carbohydrate is

used in sizing industry:

A. Glucose

**B.** Fructose

C. Lactose

D. Starch

**Answer: B** 

225. The carbohydrates are important

constituent of our diet, they function as:

A. Bio fuels of provide energy

B. Shock absorbing pad

C. Heat insulator

D. None

Answer: C

**226.** Glucose forms many derivatives. The derivative which will help to prove the furanose structure is:

A. Osazone

B. Benzoyl

C. Acetyl

D. Isopropylidene

Answer: C

**227.** A compound of non-sugar and glucose which yields glucose on hydrolysis found in plants, is called:

A. Alkoxide

B. Glucoside

C. Glycoside

D. None of these

Answer: B

**228.** An essential constitution of a diet is:

A. Starch

B. Glucose

C. Carbohydrate

D. Protein

Answer: B

229. Which carbohydrate is used in silvering of

mirrors:

A. Sucrose

B. Starch

C. Glucose

D. Fructose

**Answer: B** 

230. Glucose gives many reactions of aldehyde

because:

A. It is hydrolysed to acetaldehyde

B. It is a polyhydroxy ketone

C. It is a cyclic aldehyde

D. It is a hemiacetal in equilibrium with

its aldehyde form in solution

Answer: B

231. Orlon is a polymer of

A.  $\alpha$ -D glucopyranose

B. Fructose

C.  $\beta$ -fructose

D.  $\beta$ -D fructose

Answer: D

**232.** The ultimate products of oxidation of most of hydrogen and carbon in food-stuffs are:

- A.  $H_2O$  alone
- B.  $CO_2$  alone
- C.  $H_2O$  and  $CO_2$
- D. None of these

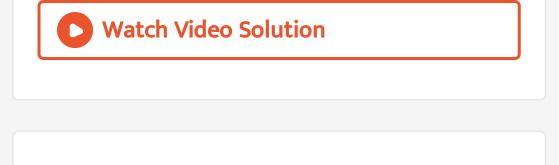
#### Answer: D



**233.** It is best to carry out reactions with sugars in neutral or acid medium not in alkaline medium. This is because in alkaline medium sugar undergoes one of the following changes.

- A. Decomposition
- B. Inversion
- C. Rearrangement
- D. Racemization

Answer: A



**234.** The calorific values of fats, carbohydrates and proteins vary in the order:

A. Fats > Carbohydrates > Proteins

B. Fats > Proteins > Carbohydrates

C. Carbohydrates > Proteins > Fats

D. Proteins > Carbohydrates > Fats

#### Answer: B





235. Proteins mainly contain:

A. C, H, O and N

B. Only C and H

C. C, H and O

D. N and H

**Answer: B** 

**236.** A substance gives ninhydrin test. It is most likely a:

A. Lipid

B. Vitamin

C. Carbohydrate

D. Protein

Answer: A

237. Proteins are composed of:

A. Nucleotides

**B. Nucleosides** 

C. Dipeptides

D. Amino acids

Answer: C

**238.** In human body enzymes hydrolyse protein into:

A. A ketogenic aids like  $CH_3COCOOH$ 

B. A hydroxy acid like  $CH_3CHOHCOOH$ 

C. Dicarboxylic acid like COOHCOOH

D. Amino acids like  $CH_2NH_2COOH$ 

Answer: D

**239.** Which statement about protein is wrong:

A. Proteins occur in all living cells

B. Proteins invariably contain N, O, C and H

C. Proteins are synthesised by plant

kingdom only

D. Proteins are also synthesised in

laboratory

Answer: D

**240.** Proteins do not respond to:

A. Biuret test

B. Lucas test

C. Ninhydrin test

D. Xanthoproteic test

Answer: B

**241.** Amino acids usually exist in the form of Zwitterions which consist of:

A. The basic group  $-NH_2$  and the acidic group -COOHB. The acid group  $-NH_3^+$  and the basic group  $CO_2^-$ C. The acid group  $CO_2^+$  and the acidic group  $NH_3^-$ 

D. No acidic or basic group





# **242.** A compound of formula $NH_2CH_2COOH$

may behave:

A. Only as an acid

B. Only as a base

C. Both acid and base

D. Neither acid nor base

#### Answer: B



# **243.** The helical structure or a secondary structure of proteins is stabilized by:

A. Peptide bonds

B. Dipeptide bonds

C. H-bond

D. None





**244.** The sequence in the structure of nucleic acid is:

A. Base + phosphate group + pentose

B. Phosphate group + sugar + base

C. Pentose + base + phosphate group

D. All





# **245.** Who pointed out peptide linkage in proteins:

A. Kekule

B. Hofmann

C. Fisher

D. Cannizzaro





## **246.** Protein can be most easily removed by:

A. Alkanes

**B.** Alkenes

C. Alkynes

D. Benzene

Answer: C



**247.** Point out the correct statement about proteins:

A. They are nitrogenous organic

compounds

of high molecular weights

B. They on hydrolysis by enzyme

give amino acids

C. Many of them are enzymes

D. All

Answer: B

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## 248. One of the essential alpha amino acids is:

A. Lysine

B. Glycine

C. Serine

D. Proline





# **249.** Which of the following contains the highest percentage of proteins:

A. Groundnut

- B. Cow's milk
- C. Egg
- D. Wheat





# **250.** The proteins are hydrolysed with acids, alkalies or enzymes finally to:

A. Amino acids

**B.** Ethers

C. Esters

D. Cycloparaffins





## **251.** The main structural feature of protein is:

- A. The ester linkage
- B. The ether linkage
- C. The peptide linkage
- D. All of the above

Answer: A



**252.** The enzyme pepsin hydrolyses:

A. Proteins to amino acids

B. Fats to fatty acids

C. Glucose to ethyl alcohol

D. Polysaccharides to monosaccharides

Answer: D

253. Protein is an important constituent of our

diet. It functions mainly as:

A. A source of energy

**B.** Construction material

C. Shock absorber

D. Reserve food

Answer: D

**254.** The end product of protein digestion is:

A. Amino acids

B. Glucose

C. Glycerol

D. Oxalic acid

Answer: C



**255.** The energy change produced by the combustion of foods is called the calorific value. The best calorific value is given by:

A. Proteins

B. Fats

C. Carbohydrates

D. Vitamins

Answer: C

**256.** Biuret test is used for the detection of:

A. Saturated oils

**B.** Sugars

C. Proteins

D. Fats

Answer: B



**257.** Proteins give:

A. A violet colour with alkaline

 $CuSO_4$  solution

B. Form a purple colour on boiling with

dilute ninhydrin solution

C. Yellow colour on boiling with  $HNO_3$ 

D. All

Answer: C

258. Which of the following is proteins:

A. Terry cotton

B. Natural silk

C. Nylon

D. Reyon

Answer: A

259. Which is an amino acid:

A. Glycine

B. Valine

C. Lysine

D. All

Answer: A

**260.** Which of the following is a simple protein?

A. Albumin

B. Globulin

C. Glutenin

D. All

Answer: B

**261.** Which is a protein:

A. Gelatin

B. Casein

C. Plasma protein

D. All

Answer: A

262. Which of the following have coiled helical

structure:

A. Proteins

**B.** Lipids

C. Carbohydrates

D. Vitamins

Answer: C

263. Globular proteins are present in:

#### A. Blood

B. Eggs

C. Milk

D. Body fluids

Answer: B



264. Keratin, a structural protein is present in:

A. Hair

B. Skin

C. Wool

D. Horn

Answer: C

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265. The protein is responsible for transport of

oxygen in the bloodstream is

- A. Haemoglobin
- B. Insulin
- C. Myoglobin
- D. Albumin

Answer: A



# **266.** Which of the following is not a classification of proteins

#### A. Enzymes

- **B.** Antibodies
- C. Antigens
- D. Hormones

#### Answer: B



# 267. Which protein is main constituent of milk

#### A. Keratin

B. Casein

C. Myosin

D. Insulin

Answer: B

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**268.** On heating with conc.  $HNO_3$  proteins give yellow colour. This test is called

A. Oxidising test

B. Xanthoproteic test

C. Hoppe.s test

D. Acid base test

Answer: B

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# 269. Naturally occuring polymer of amino acids

is

A. Polythene

B. PVC

#### C. Proteins

 $\mathsf{D.}\,CH_3COOH$ 

#### Answer: C

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# **270.** Proteins are polymer of amino acids . Which of the following is not a protein

A. Wool

B. Nails

C. Hair

D. DNA

Answer: D

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271. Molecular weight of a protein is

A. 10000

B. 1,000-10,000

#### C. 100-1,000

D. greater than 10,000

#### Answer: D



#### 272. A Protein that controls the metabolism of

glucose is

A. Oxytocin

B. Insulin

C. Haemoglobin

D. Keratin

#### Answer: B



273. Insulin, a protein acts as

A. An antibody

B. A hormone

C. An enzyme

D. A transport agent

Answer: B

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#### 274. Protein which acts as hormone is

A. Casein

B. Oxytocin

C. Trypsin

D. Keratin





### **275.** Decarboxylation of glycine yields

A.  $CH_4$ 

 $\mathsf{B.}\,CH_3COOH$ 

 $\mathsf{C.}\,CH_3NH_2$ 

D. Ethanamide

Answer: C



# 276. The purine base present in RNA is

A. Guanine

B. Thymine

C. Cytosine

D. Uracil

Answer: D

**277.** Which vitamin is closely involved in the formation of collegent-protein present in connective tissues and bones

A. Riboflavin

B. Ascorbic acid

C. Niacin

D. Cyanocobalamin

Answer: B

**278.** Simple proteins bonded with a nonprotein prosthetic group (acting as cofactor) are called

A. Simple proteins

B. Conjugated proteins

C. Proteonic proteins

D. None

Answer: B

# **279.** Which of the following is a conjugated protein

- A. Glycoprotein
- B. Phosphoprotein
- C. Chromoprotein
- D. All are correct

Answer: D



**280.** Proteins give a white precipitate with Millon's reagent, which is

A. Mercurous and mercuric nitrate in  $HNO_3$ 

B. Mercurous and mercuric chloride in *HCL* 

C. Mercurous and mercuric chloride in

 $HNO_3$ 

D. None





281. Blood protein is

A. Albumin

- B. Haemoglobin
- C. Both (a) and (b)

D. None





# **282.** Which is not a fibrous protein?

A. Wool

B. Insulin

C. Nails

D. Skin



**283.** Compounds containing both  $-NH_2$  and

-COOH groups are called

A. Proteins

B. Dicarboxylic acids

C. Amino acids

D.  $\alpha$ -hydroxy acids

Answer: C

**284.** The pH value of a solution in which a polar amino acid does not migrate under the influence if electric field is called

A. Isoelectronic points

B. Isoelectric point

C. Neutralisation point

D. None

Answer: A

285. Two reactions are said to be coupled if

#### A. Both $\delta G_1$ and $\delta G_2$ are negative

- B.  $\delta G_1$  is positive but  $\delta G_2$  is negative
- C.  $\delta G_1$  and  $\delta G_2$  are possitive
- D. None of the above

Answer: B



286. The no. of polypeptide chains present in a

molecule of haemoglobin is

A. One

B. Two

C. Three

D. Four

Answer: D

287. The Ph of blood is (approximately)

A. 7.4

B. 5.2

C. 11.3

D. 9.6

Answer: A



288. Hyperglycemia refers to

A. High blood sugar level

B. High salt conc. In blood

C. High blood pressure

D. Low sugar level in blood

Answer: A

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**289.** Digestion of fat in intestine is aided by :

A. Diffusion

**B.** Protection

C. Peptization

D. Emulsification

Answer: D

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#### 290. Which of the following is the female sex

hormone

A. Estrone

B. Testostrene

C. Cortisone

D. Thyroxine

Answer: A

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291. The hydrolysis of starchy foods begins in

the mouth by enzymes present in saliva . The

enzymes are

A. Amylase

**B.** Protease

C. Ptyalin

D. Maltase

Answer: C

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292. Enzymes trypsin converts

A. Proteins into  $\alpha$ -amino acids

B. Starches into sugar

C. Glucose into glycogen

D.  $\alpha$ -amino acids into proteins

Answer: A

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293. The primary products of photosynthesis

in green plants . It contains the element

A. Fructose

B. Glucose

C. Maltose

D. Cellulose

Answer: B

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### 294. Chlorophyll is the green colouring matter

of plant . It contains the element

A. Sodium

B. Potassium

C. Magnesium

D. Manganese

Answer: C

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295. Which of the following is provitamin A

A. Carotene

B. Calciferol

C. Ascorbic acids

D. Ergosterol

#### Answer: A



#### 296. The green pigment of plants essential for

the formation of carbohydrates by

photosynthesis is

A. Acrophyll

B. Lyphyll

C. Chlorophyll

D. None of the above

Answer: C

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**297.** Which of the following regulates the metabolism of sugars

A. Thyroid

B. Insulin

C. Hydrocortisone

D. None

Answer: B

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## **298.** In the chemical sense digestion is basically

A. Hydrolysis

B. Anabolism

C. Hydrogenation

D. Dehydrogenation

Answer: A

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299. Deficiency of calcium leads to

A. Anaemia

B. Tetany

C. Scurvy

D. Rickets

Answer: D



**300.** The ultimate products of oxidation of most of the hydrogen and carbon in food - stuffs are

A. Water only

#### B. Carbondioxide only

C. Water and carbon dioxide

D. None of these

Answer: C

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**301.** Zinc is a constituent of

A. Enzymes

B. Insulin

C. Tissues

D. All are correct

#### Answer: D



#### 302. Which is involved in blood clotting

- A. Fibrinogen
- B. Pepsinogen

C. Trypsinogen

#### D. None

Answer: A

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### **303.** Deficiency of which metal ion causes anaemia

A. Zn

B. Fe

C. Mg

D. Na

Answer: B

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#### **304.** The metal ions present in body fluids are

A. Sodium, Potassium, Calcium

- B. Sodium ,Calcium
- C. Potassium , Zinc

D. Magnesium, Iron





# **305.** The metal ion present in the human body in greater % is

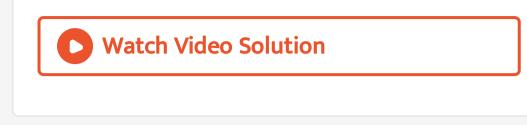
A. Ca

B. Na

C. K

D. Fe



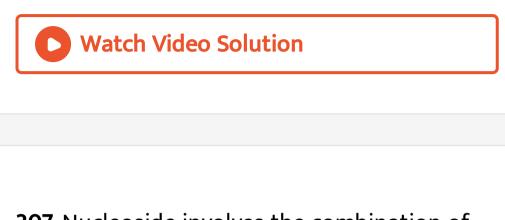


#### **306.** White blood cells act as

- A. As source of energy
- B. For blood clotting
- C. As defence against infection
- D. As a medium for oxygen transport from

lungs to tissues





#### **307.** Nucleoside involves the combination of

- A. Sugar + base + $H_3PO_4$
- B. Sugar + base
- C. Sugar + acid
- D. None

Answer: B



- **308.** Water is important to living being because
  - A. It is a compound of hydrogen and oxygen
  - B. It can be obtained in pure form
  - C. It is a good solvent and its boiling point
    - is moderately high
  - D. It is colourless liquid





#### **309.** A gene is a segment of a molecule of

A. DNA

B. m-RNA

C. t-RNA

D. Protein

**Answer: A** 



**310.** Protein synthesis occurs:

A. Transcription

**B. Translation** 

C. Replication

D. Duplication

Answer: B

**311.** Which of the following gives maximum energy in metabolic process

A. Proteins

B. Carbohydrates

C. Vitamins

D. Fats

Answer: D

**312.** The chemical change in a DNA molecule that leads to the synthesis of proteins with different amino acids sequence is called

A. Allergy

**B.** Mutation

C. Transcription

D. Metabolism

Answer: B

**313.** Which of the following is molecular disease ?

A. Allergy

B. Cancer

C. Measles

D. Sickle cell anaemia

#### Answer: D

**314.** The nutrient used in the body as a source of energy as a raw material for growth and repair is

A. Fat

B. Carbohydrates

C. Proteins

D. Vitamins

Answer: C

315. The intermediate compound in the

conversion of starch to glucose is :

A. Lactose

B. Maltose

C. Fructose

D. Sucrose

Answer: B

**316.** Molisch's test is used for :

A. Monosaccharides

**B.** Disaccharides

C. Polysaccharides

D. All

Answer: D

**317.** Number of possible isomers of glucose is :

A. 10

B. 14

C. 16

D. 20

Answer: C



**318.** Glycogen on hydrolysis gives :

A. Starch

- B. Amylopectin
- C. Amylose
- D. Glucose

Answer: D



319. Carbohydrates are stored in the body as :

A. Sugars

B. Starch

C. Glucose

D. Glycogen

Answer: D

320. The enzyme that hydrolyses cellulose into

glucose is :

A. Invertase

B. Zymase

C. Lactase

D. Emulsin

Answer: D

**321.** Which of the following is a disaccharide:

A. Lactose

B. Starch

C. Cellulose

D. Fructose

Answer: A

322. In fermentation by zymase, alcohol and

 $CO_2$  are obtained from :

A. Glucose

B. Invert sugar

C. Fructose

D. All

Answer: A

#### 323. Glycogen is :

A. Monosaccharides

**B.** Disaccharides

C. Trisaccharide

D. Polysaccharide

Answer: D

**324.** Which of the following are all disaccharides:

A. Maltose, sucrose, lactose

B. Maltose, lactose, glucose

C. Glycogen, lactose, sucrose

D. Starch, maltose, lactose

Answer: A

325. Monosaccharides containing ketonic

group are called :

A. Aldoses

**B. Ketoses** 

C. Sucrose

D. Cellulose

Answer: B

**326.** Raffinose on hydrolysis forms :

A. Glucose

**B.** Fructose

C. Galactose

D. All

Answer: D

327. Which of the following enzymes are used

to convert starch into alcohol :

A. Maltose, diastase

B. Invertase, Zymase

C. Diastase, maltase, zymase

D. Invertase, diastase, zymase

Answer: C

#### 328. Glucose is used in :

A. Manufacture of vitamin C

B. As preservative

C. In the manufacture of alcohol

D. All

Answer: D

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**329.** Glucose gives test with :

- A. Tollen's reagent
- B. Fehling's solution
- C. Benedict's solution
- D. All

#### Answer: D

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330. Glucose is

A. Neutral ferric chloride

#### B. $CHCl_3 + KOH$ (alc.)

C. Ammoniacal  $AgNO_3$ 

D.  $C_2H_5ONa$ 

#### Answer: C

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### **331.** Acetone may be obtained from starch by

the action of :

A. Acid

B. Bacteria

C. Oxidising agent

D. None

Answer: B

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332. How many atoms are there in pyranose

ring:

B. 3

C. 6

D. 7

Answer: C

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333. Which does not exist?

A. Glucose

**B.** Fructose

C. Both (a) and (b)

D. Sucrose

#### Answer: D



## 334. Glucose reacts with acetic anhydride to

from :

A. Monoacetate

B. Tetra acetate

C. Penta acetate

D. Hexa acetate

### Answer: C



## 335. Which of the following monosaccharide is

pentose :

A. Glucose

**B.** Fructose

C. Arabinose

D. Galactose

### Answer: C

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336. Glucose contains :

A. One-CHO group

B. Five -OH groups

C. One primary alcoholic group and four

secondary alcohol groups

D. All are correct

Answer: D

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**337.** Oligosaccharides contain \_\_\_\_\_ simple sugar units :

B. 4 to 8

C. 6 to 12

D. 6 to 10

Answer: A

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338. Monosaccharides usually contain :

A. 3 to 8 carbon atoms

B. 5 to 8 carbon atoms

## C. 2 to 10 carbon atoms

D. 6 to 10 carbon atoms

Answer: A

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339. Emil Fischer was awarded Nobel Prize for

his work on :

A. Sugars and purine synthesis

B. Ammonia discovery

C. Optical activity

D. Alkaloid synthesis

### Answer: A

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340. Maltose is made up of :

A. α-D glucose

B.  $\alpha$  and  $\beta$ -D glucose

C. Glucose and fructose

D. Fructose only

Answer: A

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**341.** Carbohydrates containing more than 10 simple units of sugar are called :

A. Monosaccharides

B. Disaccharides

C. Trisaccharide

D. Polysaccharide

### Answer: D

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## **342.** Now carbohydrates are regarded as :

- A. Aromatic compounds
- B. Polyfunctional compounds
- C. Alicyclic compounds
- D. Polysaccharide

### Answer: B



**343.** Glucose on reduction with Na/Hg and water gives :

A. Sorbitol

B. Fructose

C. Saccharic acid

D. Gluconic acid





## 344. The important monosaccharides are :

A. Aldoses

**B. Ketoses** 

C. Aldoses and ketoses

D. None

Answer: C



# 345. Which of the following is oligosaccharide

A. Sucrose

:

B. Maltose

C. Lactose

D. All

Answer: D





**346.** Which is polysaccharide:

A. Nylon

B. Polyethene

C. Glucose

D. Cellulose

Answer: D

347. Monosaccharides containing aldehyde

group are called :

A. Aldoses

B. Ketoses

C. Polysaccharides

D. Disaccharides

Answer: A

**348.** The colour of the precipitate formed when a reducing sugar is heated with Fehling's solution is :

A. Brown

B. Red

C. Blue

D. Green

Answer: B

349. Glucose and cane sugar can be

distinguished by:

A. Fehling.s solution

B. Baeyer.s reagent

C. Molisch.s test

D. lodine solution

Answer: A

**350.** A certain compound gives negative test with ninhydrin, but positive test with Benedict.s solution. The compound is :

A. Protein

B. Monosaccharide

C. Lipid

D. Amino acid

Answer: B

**351.** Carbon atoms in diamond are bonded with each other in configuration :

B.  $C_2$ 

A.  $C_5$ 

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

### Answer: B

352. Which of the following sugars is present

in genetic factor DNA molecule :

A. Glucose

B. Maltose

C. Ribose

D. Deoxyribose

Answer: D

**353.** Cellulose, starch and glycogen are the polysaccharides having \_\_\_\_ monosaccharide unit:

A. Glucose

B. Ribose

C. Fructose

D. Pentose

Answer: A

**354.** Colour of osazone of glucose is :

A. Red

B. Brown

C. Yellow

D. Orange

Answer: C



355. Fehling.s solution and Benedict.s solution

are reduced by glucose to form :

A. CuO

 $\mathsf{B.}\,Cu_2O$ 

 $\mathsf{C}. Cu(OH)_2$ 

D. Cu

**Answer: B** 

356. When glucose is heated with nitric acid,

the product is :

A. Gluconic acid

B. Glucaric acid

C. Glycolic acid

D. Oxalic acid

Answer: B

**357.** Starch is made up of:

A. Glucose and fructose

B. Amylose and amylopectin

C. Amylose and glycogen

D. Amylopectin and glycogen

Answer: B

358. Which of the following carbohydrate is

synthesised by nature on the largest scale :

A. Glucose

**B.** Fructose

C. Lactase

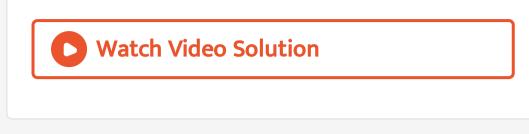
D. Cellulose

**Answer: D** 

**359.** Cane sugar is made of :

A. 5	membered	glucose	ring	and	5
membered fructose ring					
B. 6	membered	glucose	ring	and	6
membered fructose ring					
C. 6	membered	glucose	ring	and	5
membered fructose ring					
D. 6	membered	glucose	ring	and	6
membered fructose ring					





**360.** Glycogen and amylopectin have :

- A. Same structure
- B. Similar structure but differ in branching

of glucose chain

C. Similar structure but differ in their

solubility in water

D. Similar structure but they are stored in

different parts of the body

Answer: B

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361. The carbon chain in fructose is identified

by converting in into:

A. α-methyl hexane

B. Cyclohexane

C. n-hexane

D.  $\alpha$ -methyl caproic acid

Answer: C

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**362.** Formation of amylene oxide ring in glucose is an indication that ring in glucose is at:

A.  $C_1$  and  $C_5$ 

B.  $C_2$  and  $C_5$ 

C.  $C_3$  and  $C_6$ 

D.  $C_2$  and  $C_4$ 

Answer: A

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**363.** The polysaccharide used in the manufacture of paper is:

A. Cellulose

B. Starch

C. Glucose

D. Sucrose

Answer: A

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**364.** Methylation of glucose with dimethyl sulphate indicates the presence of following group in glucose :

## A. -CHO group

B. -COOH group

C. -OH group

D. None

Answer: C

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**365.** Which of the following elements are necessary for maintaining fluid balance in the body:

- A. Calcium and magnesium
- B. Potassium and sodium
- C. Iron and magnesium
- D. None of the above

Answer: B

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**366.** The store house for all biological information is :

A. RNA

B. m-RNA

C. DNA

D. None of the above

Answer: C

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367. What is not true for enzymes :

A. They are powerful biocatalysts

B. They are all proteins

## C. They are highly specific in their action

D. They do not lose activity on heating

Answer: D

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**368.** Which one is the complementary base of adenine in one strand to that in the other strand of DNA:

## A. Cytosine

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

#### Answer: D



369. Which one is the complementary base in

RNA strand to the adenine base in DNA during

protein synthesis:

## A. Adenine

- B. Guanine
- C. Uracil
- D. Cytosine

#### Answer: D



370. The enzyme that hydrolyses casein of milk

into paracasein is:

## A. Renoline

- B. Renin
- C. Replication
- D. Renil

#### Answer: B



# 371. Which of the following is not a pyrimidine

base :

## A. Thymine

- B. Guanine
- C. Cytosine
- D. Uracil

Answer: B



372. The process of formation of RNA from

DNA is known as :

A. Translation

- **B.** Transcription
- C. Replication
- D. Mutation

Answer: A

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**373.** Ribose sugar is a component of :

#### A. DNA

B. RNA

C. Glucose

D. Wax

Answer: B

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374. The enzyme present in saliva is :

A. Pepsin

**B.** Peptidase

C. Lipase

D. Ptyalin

#### Answer: D



375. Antibodies are

A. Carbohydrates

**B.** Proteins

C. Phospholipids

D. Lipids

Answer: B

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## **376.** Pancreatic juice contains the enzyme :

A. Zymase

**B.** Invertase

C. Diastase

D. Lipase





# **377.** Which of the following statements about enzymes is incorrect :

A. The catalytic action of an enzyme is not specific

B. An enzymatic reaction is highly sensitive

to temperature

C. The catalytic action of enzymes is due to

their capacity

to lower the energy of activation of a

particular reaction

D. None of these

Answer: A

378. Which of the following is not present in

RNA:

A. Ribose

B. Uracil

C. Thymine

D. Phosphate

Answer: C

379. Deoxyribonucleic acid (DNA) consists of

the following units:

A. Peptides

B. Glucosides

C. Nucleotides

D. Deoxyribose

Answer: C

**380.** The sugar part of DNA is :

A. Glucose

B. Sorbose

C. Ribose

D. Deoxyribose

Answer: D

**381.** Redness of blood is because of the presence of :

A. Iron in haeme pigment

B. Haemoglobin

C. Copper in haeme pigment

D. All

Answer: A

**382.** Which of the following compounds is responsible for the transmission of heredity characters:

A. RNA

B. DNA

C. Glucose

D. Haemoglobin

Answer: B

**383.** With which one of the pollutant gases in air, haemoglobin of blood undergoes irreversible chemical combination thus causing death. The gas is :

A. Carbon monoxide

B. Carbon dioxide

C. Sulphur dioxide

D. Ozone

Answer: A

**384.** A chemical substance acts as the currency of energy metabolism in a cell. It is :

A. Adenosine triphosphate

B. Adenosine diphosphate

C. Adenosine monophosphate

D. Glucose

Answer: A

**385.** Which statement is not correct for an enzyme :

- A. It acts as a biocatalyst
- B. Its aqueous solution is colloidal
- C. It can catalyse any chemical reaction
- D. Its catalytic efficiency is temperature

dependent

Answer: C



**386.** An antigen develops antibodies which protect the body from their harmful effects. The antibodies are :

A. Immunoglobulins

B. Phospholipids

C. Albumins

D. Lymphocytes

#### Answer: A

**387.** In blood, the transport of oxygen from lungs to tissues is carried out by :

A. White blood cells (leukocytes)

B. Red blood cells (erythrocytes)

C. Fibrinogen

D. Globulins

Answer: B

388. DNA molecule consists of units of:

A. Base-sugar

- B. Base-sugar-phosphate
- C. Base-phosphate
- D. None of these

Answer: B

389. The antibodies necessary to protect new

born babies from infection are derived from:

A. Cow's milk

B. Pasteurised milk

C. Mother's milk

D. Honey

Answer: C

390. The red colouring matter of blood which

transports oxygen contains an element in a

system of rings. The element is :

A. Iron

B. Magnesium

C. Cobalt

D. Calcium

Answer: A

**391.** Which of the following statements is incorrect ?

A. Two polynucleotide chains pointing in opposite directions are coiled to from a double

helix

- B. Both helixes are right handed
- C. The helixes have ten nucleotides

in each turn

D. The two chains are not complementary

to each other

Answer: D

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392. Oxygen, necessary for life on earth was

formed in atmosphere as a result of :

A. Eradication of ozone

B. Photosynthesis

C. Electric discharge on water

D. None of the above

Answer: B

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393. Rice has deficiency of the essential amino

acid:

A. Alanine

B. Glycine

C. Lysine

D. Leucine

#### Answer: C



# **394.** Which of the following base is not present in DNA?

A. Guanine

B. Adenine

C. Thymine

D. Uracil

#### Answer: C



**395.** The simple prokaryotic cells evolved when life began on earth. Which of the following nutrients used for evolving more complex eukaryotic cells:

## A. $CO_2$

### B. $N_2$

- C.  $CO_2$  and  $N_2$
- $\mathsf{D}.\,O_2$

#### Answer: C

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**396.** Which parts of amino acid molecules are linked through hydrogen bonds in the secondary structure of proteins :

### A. -SH group

- B. -COOH group
- C. C=O and -NH groups
- D. Alkyl group

#### Answer: C

:

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## 397. The structure of RNA molecule consists of

- A. Double helix
- B. Single helix
- C. Single strand
- D. Branched chain

Answer: C



**398.** The main point of difference between DNA and RNA is :

A. Presence of thymine in DNA and RNA

B. Presence of deoxyribose and thymine

in DNA, ribose and uracil in RNA

C. Presence of ribose and thymine in DNA,

deoxyribose and uracil in RNA

D. Presence of deoxyribose in DNA

and ribose in RNA

Answer: B

**399.** Insulin has 51 amino acids in two polypeptide chains which are linked by :

A. One sulphide bond

B. One disulphide bond

C. Two disulphide bonds

D. Three disulphide

Answer: C

400. Discuss the structure and function of

DNA.

A. Protein synthesis

B. Self replication

C. Store of hereditary information

D. All of the above

Answer: D

401. The purine base present in DNA is :

A. Adenine

B. Cytosine

C. Uracil

D. Thymine

Answer: A

402. Which of the following is not present in

nucleotide :

A. Guanine

B. Cytosine

C. Adenine

D. Thyroxine

Answer: D

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

A. Transport oxygen

B. Provide immunity

C. Catalyse Biochemical reaction

D. Provide energy

Answer: C

404. DNA has deoxyribose and base and third

compound is :

A. Phosphate group

B. Ribose

C. Adenine

D. Thymine

Answer: A

**405.** Which of the following elements is responsible for oxidation for water to  $O_2$  in the biological process?

A. Fe

B. Mn

C. Cu

D. Mo

Answer: A

**406.** Enzymes are :

A. Catalysts

B. Fatty acids

C. Proteins

D. Carbohydrates

Answer: C



407. Which one of the following is not present

in RNA?

A. Thymine

B. Ribose

C. Uracil

D. Phosphate

Answer: A

408. The disease .diabetes mellitus. is caused

by the deficiency of :

A. lodine

B. Insulin

C. Phenyl alanine hydroxylase

D. Lysine

Answer: B

409. The hormone used as an oral

contraceptive is :

A. Aldosterone

**B.** Cortisone

C. Progesterone

D. Testosterone

#### Answer: C

410. Bleeding gums are caused by deficiency of

A. Thiamine

:

B. Ascorbic acid

C. Folic acid

D. Vitamin E

Answer: B

**411.** Insulin is secreted from —

A. Ovary

**B.** Testes

C. Adrenal cortex

**D.** Pancreas

Answer: D

412. Increased blood pressure may be caused

by excess secretion of :

A. Thyroxin

**B.** Testosterone

C. Estradiol

D. Adrenalin

Answer: D

413. Biological catalyst (enzymes ) belong to :

A. Polysaccharides

B. Synthetic polymers

C. Polypeptides

D. Poly nitrogen heterocycles

Answer: C

**414.** Which is not member of vitamin B complex group :

A. Retinol

B. Thiamine

C. Riboflavin

D. Pyridoxine

Answer: A

**415.** Which of the following nutrients is increased on sprouting the pulses such as sprouted black gram or bengal gram

A. Vitamin A

B. Vitamin B

C. Vitamin C

D. Iron

Answer: D

**416.** The science of using microorganisms for

the beneficial effects in industries is called:

A. Biotechnology

B. Genetic engineering

C. Enzymology

D. Microbiology

Answer: B

**417.** All except one may be caused by a virus:

A. Poliomyelitis

B. Influenza

C. Malaria

D. Small pox

Answer: C

418. The chief constituents of biological

membranes are:

A. Proteins

B. Waxes

C. Triglycerides

D. phospholipids

Answer: C

419. A disease can often be transmitted by

polluted water is:

A. Rabies

B. Typhoid

C. Common cold

D. Malaria

Answer: B

**420.** Most viruses are composed of:

A. Proteins

B. Proteins and nucleic acid

C. Cellulose and fat

D. fats and proteins

Answer: B

**421.** Deficiency of sodium and potassium causes:

A. Muscular cramps

B. Headache

C. Diarrhoea

D. All are correct

Answer: D

## 422. Progesterone is a:

A. Steroid hormone

B. Proteins hormone

C. Vitamin

D. Alkaloid

Answer: A

**423.** Which carbohydrate cannot be

metabolised by human being:

A. Maltose

B. Cellulose

C. Amylose

D. Amylopectin

Answer: B

**424.** Saliva contains:

A. Amylases

B. Bile

C. Vitamins

D. Trypsin

Answer: A



**425.** Bile juice aids in the digestion and absorption of fats because it contains:

A. Bile pigment

B. Lipase

C. Cholesterol

D. Bile salts

Answer: D

**426.** which component of the typical birth control pill is responsible for regulating the menstrual cycle:

A. Androgen

B. Estrogen

C. Progestin

D. Oxytocin

Answer: C

**427.** The human body does not produce:

A. Enzymes

**B. Vitamins** 

C. DNA

D. Hormones

**Answer: B** 



**428.** OXY-haemoglobin contains:

A. Less oxygen than haemoglobin

B. More oxygen than haemoglobin

C. Contains more carbon dioxide

D. Contains less carbon dioxide

Answer: B

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429. Glucose is stored in the liver in the

polysaccharide form called:



# **430.** The digestion of starch by the enzyme amylase occurs in:

A. Stomach

B. Liver

C. Muscles

D. Small intestine

# Answer: D

**431.** Which of the following is a female sex hormone:

A. Estrogen

B. Estradiol

C. Progesterone

D. All of the above

Answer: D

**432.** Emulsification of fat is brought about by:

A. Bile pigment

B. Bile salts

C. Hydrochloric acid

D. Pancreatic juice

Answer: B

433. AIDS is caused by

A. Cretinism

B. Dwarfism

C. Sterility

D. Addison's disease

Answer: D

**434.** All digestive enzymes are:

A. Ligases

**B. Oxidases** 

C. transferases

D. Hydrolases

Answer: D

**435.** Cellophane is made from :

A. Cellulose

B. Phenol

C. Gum

D. Petroleum

Answer: A

**436.** Monosaccharides are :

A. Sweet

B. Sour

C. Tasteless

D. Offensive

Answer: A



437. An example of disaccharide made up of

two units of the same monosaccharides is :

A. Maltose

B. Sucrose

C. Lactose

D. None

**Answer: A** 

**438.** Ring structure of glucose is due to formation of hemiacetal and ring formation between :

- A.  $C_1$  and  $C_5$
- B.  $C_1$  and  $C_4$
- C.  $C_1$  and  $C_3$
- D.  $C_3$  and  $C_4$

### Answer: A



**439.** The charring product formed when  $C_6H_{12}O_6$  is heated with conc. $H_2SO_4$  is due to

A. Oxidation

:

**B.** Reduction

C. Dehydration

D. Dehydrogenation

Answer: C

440. To become a carbohydrate, a compound

must contain atleast :

A. 6 carbons

B. 3 carbons

C. 4 carbons

D. 2 carbons

**Answer: B** 

**441.** Which of the following gives reddish brown precipitate with dilute solution of resorcinol in dilute HCI:

A. Glucose

B. Fructose

C. Lactose

D. Maltose

Answer: B

**442.** Lactose on hydrolysis yields :

- A. Two glucose molecules
- B. Two galactose molecule
- C. A galactose and fructose molecule
- D. A galactose and a glucose molecule

Answer: D

**443.** Which statement about ribose is incorrect :

A. A polyhydroxy compound

B. An aldehyde sugar

C. Has six carbon atoms

D. Exhibits optical activity

Answer: C

**444.** The number of atoms in the ring structure of pyranose is : A. 4

B. 5

C. 6

D. 7

Answer: A



445. Main constituents of the cell walls of

plants is :

A. Cellulose

B. Glycogen

C. Lactose

D. Chlorophyll

Answer: A

# **446.** Dextrins $(C_6H_{10}O_5)$ are used in :

A. Making adhesive

**B.** Confectionary

C. Sizing paper

D. All

Answer: D



**447.** Animal starch is the name given for :

# A. Glycogens

- **B.** Lactogens
- C. Cellulose
- D. None

Answer: A



448. Cellulose trinitrate is used in preparation

of:

A. Food

- **B. Explosives**
- C. Rayon
- D. None

**Answer: B** 

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**449.** Cellulose is a linear polymer of :

A. lpha glucose

B.  $\beta$  glucose

C.  $\alpha$  fructose

D. None

Answer: B

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**450.** Glycogen is a branched polymer of :

A.  $\alpha$  glucose

B.  $\beta$  glucose

# C. $\alpha$ fructose

D. None

### Answer: A



### 451. Gums are :

A. Polysaccharides of more than

one type of monosaccharides

B. Used as thickening agent

C. Used for improvement of texture

in food industry

D. All

Answer: D

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**452.** Which are called biomolecules :

A. Carbohydrate

B. Protein

C. Lipids

D. All

### Answer: D



453. Nucleic acids are :

A. Polymers of nucleotides

B. Polymers of nucleosides

C. Polymers of purine bases through

phosphate ester bonds

D. Phosphate ester bonds

Answer: A

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454. The process of respiration in absence of

oxygen is called :

A. Metabolic

B. Aerobic

C. Anaerobic

D. Glycolysis

Answer: C

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455. Which of the following body parts is not

composed of structural proteins :

A. Muscle

B. Nails

C. Bones

D. Skin and bone matrix

Answer: B

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**456.** One mole of glucose on respiration produces :

A. 36 mole of ATP

B. 34 mole of ATP

C. 40 mole of ATP

D. 38 mole of ATP

Answer: A

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# **457.** Which of the following hormones contains iodine :

A. Adrenalin

**B.** Testosterone

C. Thyroxine

D. Insulin

Answer: C

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458. The ph of fluid in the stomach is :

A. 2.0

B. 7.0

C. 4.2

D. 9.2

### Answer: A



**459.** The purine bases present in both DNA and RNA are :

A. Guanine and adenine

B. Guanine and uracil

C. Adenine and thymine

D. Cytosine and uracil

Answer: A

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460. Bases common to DNA and RNA are :

A. Adenine, cytosine ,uracil

B. Guanine , adenine , cytosine

C. Guanine , uracil , thymine

D. Adenine , thymine , guanine

Answer: B

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461. Nucleic acids contain :

A. 4 purine bases

B. 4 pyrimidine bases

C. 2 purine bases and 3 pyrimidine bases

D. 4 pyrimidine bases and one purine base





462. Adenosine is an example of :

A. Nucleotide

- B. Nucleoside
- C. Purine base
- D. Pyrimidine base

Answer: B



# **463.** Which of the following is a protein hormone?

A. Insulin

B. Oxytocin

C. BOTH (A) AND (B)

D. None

### Answer: C





464. The chemical messenger produced in the

endocrine (duct-less) glands are grouped as:

A. Vitamins

**B.** Lipids

C. Antibiotics

D. Hormones

Answer: D

**465.** The function of DNA is :

A. To synthesise RNA

B. To synthesise the necessary proteins

C. To carry the hereditary characteristics

from generation to generation

D. All are correct

Answer: D

466. Which of the following base is found only

in RNA and not in DNA :

A. Thymine

B. Uracil

C. Adenine

D. Guanine

**Answer: B** 

467. The element present in traces in insulin is

A. Iron

:

B. Cobalt

C. Zin

D. Magnesium

Answer: C

468. The base present only in RNA and not in

DNA is :

A. Uracil

B. Cytosine

C. Thymine

D. Guanine

Answer: A

**469.** The hormone which maintains blood sugar level is :

A. Oxytocin

B. Haemoglobin

C. Insulin

D. Ptylin

Answer: C

470. A compound which catalyses a chemical

reaction in a living organism is called a (n) :

A. Carbohydrate

B. Enzyme

C. Lipid

D. Vitamin

Answer: B

**471.** Hormones function as :

A. Chemical messengers

B. Coenzymes

C. Provitamins

D. All

Answer: A



**472.** Enzyme trypsin converts:

A. Amino acids into proteins

B. Glucose into glycogens

C. Starch into sugar

D. Proteins into amino acids

Answer: D

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473. The enzyme carbonic anhydrase catalyses

the change :

## A. Carbonic acid to $H_2O$ and $CO_2$

### B. Lactose to glucose and galactose

C. Maltose to glucose

D. None

Answer: A

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**474.** CO- factors (non- protein prosthetic groups) used to bond conjugated proteins are

- A. Carbohydrates
- B. Phosphoric acid
- C. Iron pigments
- D. All the correct

### Answer: D



# 475. Which of the following is proteolytic

### enzyme:

A. Insulin

- B. Diastase
- C. Pepsin
- D. Adenine

### Answer: C



476. Photosynthesis in plants is brought about

by chlorophyll. It involves :

A. Conversion of chemical energy into

radiant energy

B. Conversion of chemical energy into

mechanical energy

C. Conversion of solar energy into chemical

energy

D. Conversion of mechanical energy into

solar energy

Answer: C

**477.** In DNA the complementary bases are :

A. Adenine and thymine , guanine and cytosine B. Uracil and adenine , cytosine and guanine C. Adenine and guanine, thymine and cytosine

D. Adenine and thymine , guanine and

uracil

Answer: A



478. Mutations arise due to :

A. Infection by microorganisms

B. Abrupt changes in genes

C. Hybridisation

#### D. Dominant character of one of the

parents

Answer: B

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479. Sudden hereditary change is called :

A. Meiosis

B. Mitosis

C. Mutation

#### D. None

#### Answer: C

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**480.** DNA dictates synthesis of :

A. Proteins

B. Lipids

C. Carbohydrates

D. Glucose





**481.** The set of reaction in a cell which help in degradation of macromolecules is called :

A. Metabolism

B. Anabolism

C. Catabolism

D. All of the above





# **482.** Which of the following is not a biotechnology product :

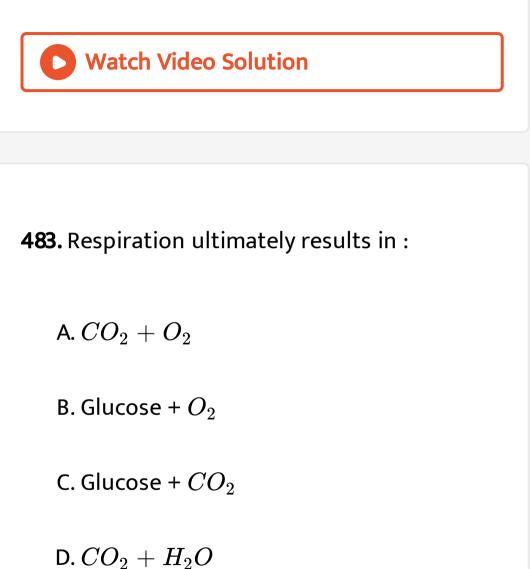
A. Interferon

B. Human insulin hormone

C. Vaccines

D. Cortisone

#### Answer: D



Answer: D



# **484.** Biological reactions associated with positive $\Delta G$ values are called :

A. Exergonic

B. Endergonic

C. Exothermic

D. Endothermic

#### Answer: B





### 485. The process photosynthesis cannot occur

in the absence of :

A. Chlorophyl

B. Oxygen

C. Catalyst

D. None

#### Answer: A

**486.** During respiration , food is oxidised to carbon dioxide in the presence of oxygen . This process is called :

A. Aerobic

B. Anaerobic

C. Anabolism

D. Catabolism

Answer: A

**487.** Degradation of one mole of glucose provides :

- A. 36 mole of ATP
- B. 10 mole of ATP
- C. 315 mole of ATP
- D. 3 mole of ATP

Answer: A



**488.** Interferon is a product of biotechnology and is used against :

A. Viral diseases

**B. Diabetes** 

C. Sickle cell anaemia

D. Haemorrhage

Answer: A

**489.** Blood clots due to :

A. RBC

B. WBC

C. Platelets

D. Globulins

Answer: C



**490.** Miller synthesised simple amino acids from:

A.  $H_2, NH_3, CH_4, H_2O$ 

 $\mathsf{B}.\, H_2,\, O_2,\, N_2,\, H_2 O$ 

 $\mathsf{C}.\,CH_4,O_2,N_2,SO_2$ 

 $\mathsf{D}.\, NH_3, O_2, CO_2, HCN$ 

#### Answer: A

**491.** A codon on the mRNA has :

A. One base

B. Two base

C. Three base

D. Variable number of bases

Answer: C

**492.** Which of the following is an example of

zwitterion :

A. Urea

B. Glycine hydrochloride

C. Ammonium acetate

D.  $\alpha$ -alanine

Answer: D

493. Among the latest discovery in cytology is :

A. Respiration

B. Genetic code

C. Enzyme

D. None

Answer: B



**494.** An example of natural biopolymer is :

A. Teflon

B. Nylon-6,6

C. Rubber

D. DNA

Answer: D

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**495.** Enzymes, in the living systems:

A. Provide energy

B. Provide immunity

C. Transport oxygen

D. Catalysed biochemical process

Answer: D

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**496.** The pH of the blood does not appreciably

change by small addition of an acid or a base

because blood :

A. Contains serum protein which acts as a

buffer

B. Contains iron as a part of the molecule

C. Can be coagulated easily

D. Is a body fluid

Answer: A

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**497.** Enzymes :

temperature

B. Consists of nucleic acids

C. Carbohydrates

D. Have all these properties

Answer: A

Watch Video Solution

498. Nucleic acids are :

- A. Phosphate-base-sugar
- B. Sugar-base-phosphate
- C. Base-sugar-phosphate
- D. Base-phosphate-sugar

Answer: C

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**499.** Name two fibrous proteins.

**500.** Deficiency of vitamin  $B_2$  causes which disease.

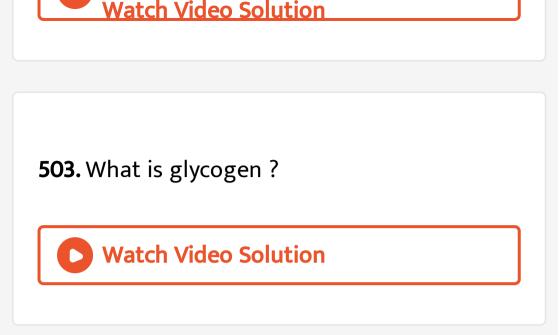


501. Write two functions of protein.

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**502.** What are the sources of vitamin K?



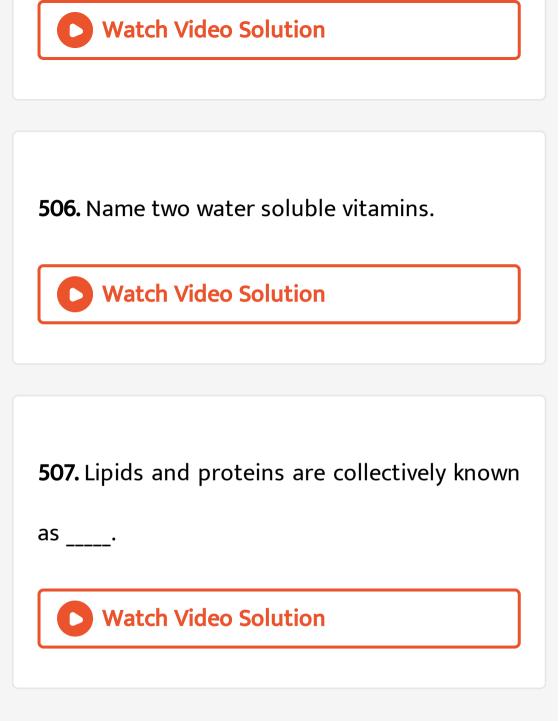


### 504. Why cellulose is not digested by human

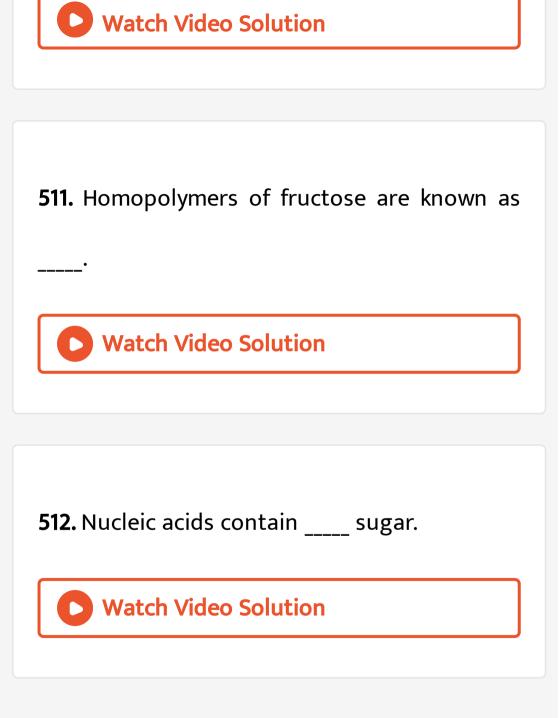
beings ?

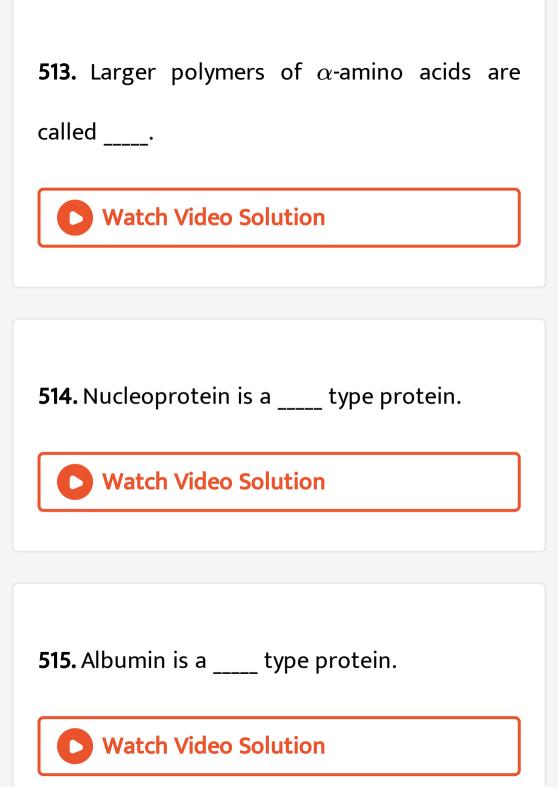
> Watch Video Solution

505. What is Zwitterion?



508. Catabolism and anabolism are collectively
known as
<b>Watch Video Solution</b>
<b>509.</b> acts as the centre of all activities of the cell.
<b>Watch Video Solution</b>
<b>510.</b> Insulin is a homopolymer of





**516.** Keratin is a \_\_\_\_\_ type protein.

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517. Starch undergoes hydrolysis in presence

of mineral acids to give fructose.True/false

 518. Glucose and fructose are chain

 isomers.TRUE/FALSE

 Watch Video Solution

## 519. Sucrose is used in silvering of mirrors.

(True/False)



520. Care sugar gives red color with Fehling.s

solution.(True/False)

Watch Video Solution

521. Hydrolysis of sucrose gives

glucose.TRUE/FALSE

Watch Video Solution

522. Glucose is a ketohexose.TRUE/FALSE

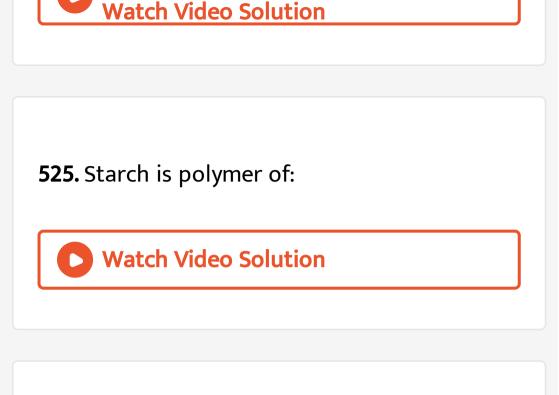


**523.** Molisch's reagent may be used to distinguish between cane sugar and glucose solution.(True/False)

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**524.** The change in optical rotation with time of freshly prepared solutions of sugar is known as :





# **526.** The function group which is found in amino acids is -COOH.TRUE/FALSE

527. Lack of vitamin B<sub>1</sub> causes scurvy.
(True/False)
Watch Video Solution

# 528. Describe the double helical structure of

DNA.



**529.** The enzyme which hydrolyses triglycerides

to fatty acids and glycerol is called zymase. TRUE/FALSE

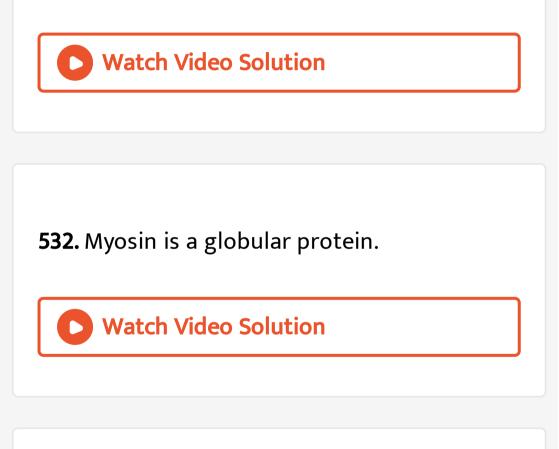


### 530. Helical structure of protein is stabilised

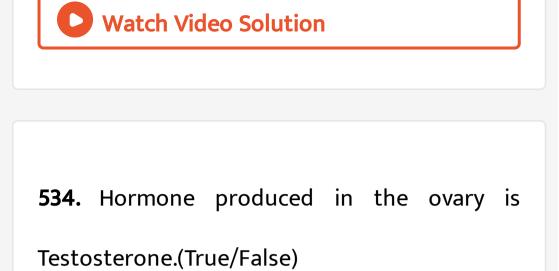
by:

531. Amino acids which has phenolic -OH group

assist backbone is Leucine.TRUE/FALSE



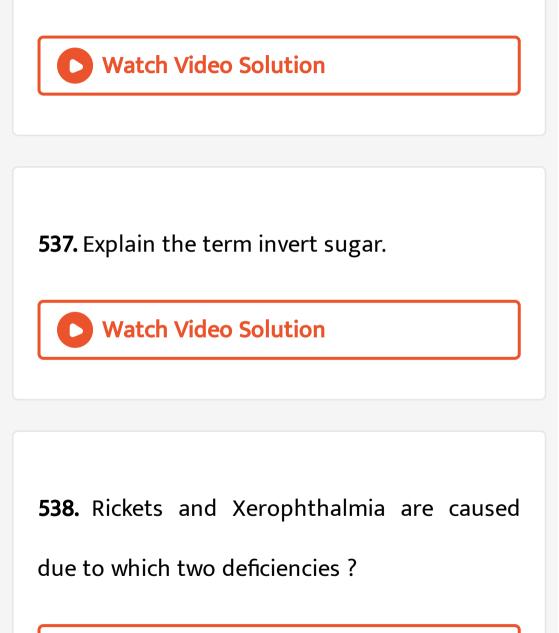
**533.** Thymine is present in RNA but not in DNA.SAY TRUE/FALSE



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**535.** What is polypeptide ?

536. Give an example of denatured protein.



539. What is biofuel ?

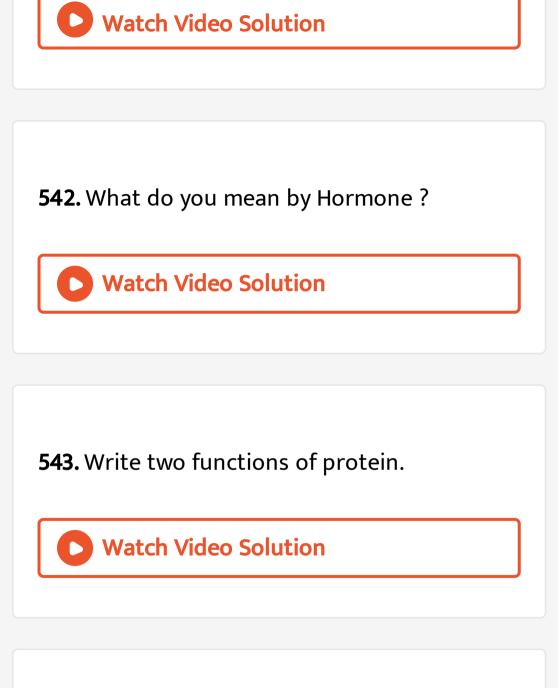
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540. Write the difference between reducing

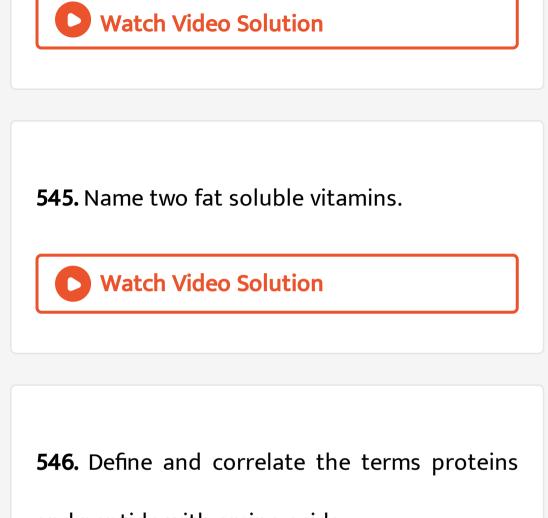
sugar and non-reducing sugar.



541. Give two functions of mitochondria.



544. Give a brief idea about insulin.



and peptide with amino acids.



547. How are sugar classified based on reducing nature of carbohydrates ?
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548. How proteins are classified depending on

their three dimensional shape ?

549. How proteins are classified on the basis of

structure?

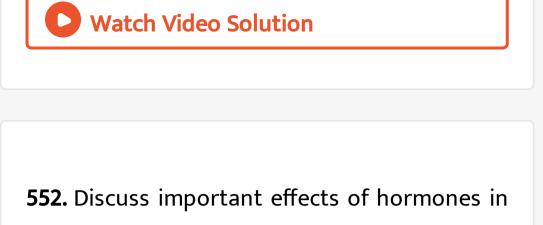
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## 550. Write important biological functions of

Protein.



**551.** Write important functions of lipids.



our body to control the biological activities.

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553. What are carbohydrates ? How are they

classified ? Give examples of each type.



554. Define and correlate the terms proteins

and peptide with amino acids.



#### 555. How are sugar classified based on

reducing nature of carbohydrates ?

556. How proteins are classified depending on

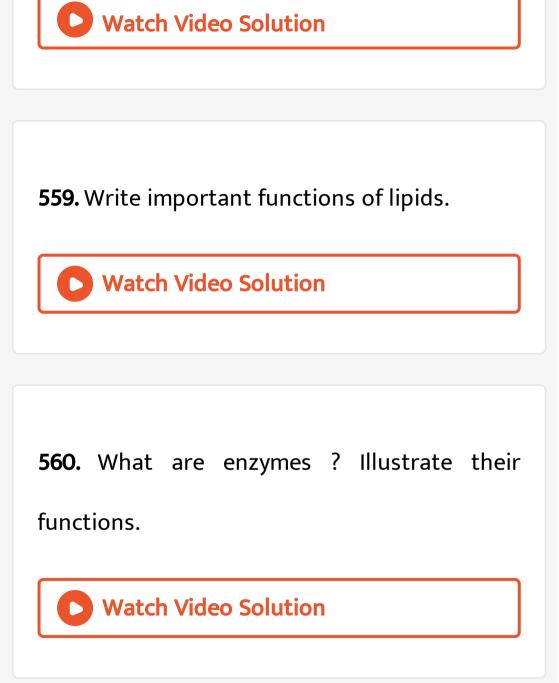
their three dimensional shape ?



# **557.** Write important biological functions of Protein.



558. What are lipids ?



561. Discuss important effects of hormones in

our body to control the biological activities.

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562. Discuss the classification and functions of

vitamins.



563. What are nucleic acids? Write the functions of nucleic acids ?
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**564.** Which of the following monosaccharide is pentose :

A. Glucose

B. Fructose

C. Arabinose

#### D. Galactose

Answer: C

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**565.** Starch on hydrolysis by a dilute inorganic mineral acid gives :

A. Sucrose

B. Glucose

C. Fructose

#### D. Maltose

Answer: D

Watch Video Solution

**566.** Glucose will show mutarotation when solvent is :

A. Acidic

B. Basic

C. Neutral

D. Amphiprotic

Answer: D

Watch Video Solution

**567.** Which is used for making rayon (artificial silk) :

A. Starch

B. Cellulose

C. Terephthalic acid

D. Adipic acid

Answer: B

Watch Video Solution

#### 568. The disaccharide having two glucose units

is :

A. Lactose

B. Maltose

C. Sucrose

#### D. Ribose

Answer: B

:

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#### 569. Molisch's test is made for the detection of

A. Alkyl halide

B. Carbohydrate

C. Alkaloid

D. Fat

Answer: B

Watch Video Solution

#### 570. After digestion, starch is converted into:

A. Glucose

**B.** Fructose

C. Lactose

D. Sucrose





**571.** Osazone formation involves only 2 carbon atoms of glucose because of :

A. Chelation

**B. Oxidation** 

C. Reduction

D. Hydrolysis





### **572.** The number of asymmetric carbon atoms

#### in fructose are :

A. 2

B. 3

C. 4

D. 5

#### Answer: B



**573.** Describe the preparation of ether by williamson synthesis.

A. Glucose and lactose

B. Glucose and fructose

C. Glucose and arabinose

D. Glucose and maltose





#### 574. Milk changes after digestion into :

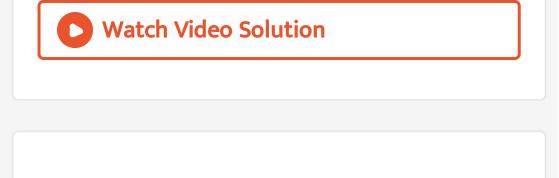
A. Cellulose

**B.** Fructose

C. Glucose

D. Lactose

Answer: C



**575.** Glucose and fructose :

A. Are isomeric compounds

B. Are polyhydroxy compounds

C. Shows epimerization

D. All

Answer: D

576. The number of asymmetric carbon atoms

in fructose are :

- A. 1
- B. 2
- C. 4

D. 6

#### Answer: C



**577.** The total number of C atoms in  $\beta$ -D

fructofuranose are :

A. 6

B. 5

C. 4

D. 7

Answer: A

**578.** Glucose reacts with acetyl chloride to form pentaacetyl glucose, it indicates presence of :

A. Five primary alcoholic groups

B. Five secondary alcoholic groups

C. Aldehyde as well as alcoholic group

D. Five -OH groups

Answer: D

**579.** Glucose when heated with  $CH_3OH$  in presence of dry HCl gas  $\alpha$ - and  $\beta$ - methyl glycosides are formed . This is because it contains :

A. An aldehydic group

B.  $-CH_2OH$  group

C. A ring structure

D. Five hydroxyl groups

#### Answer: C

580. Ribose sugar is a component of :

A. DNA

B. RNA

C. Glucose

D. Wax

Answer: B

581. Glucose with excess of phenylhydrazine

from :

A. Fructosazone

B. Glucose phenyl hydrazone

C. Glucosazone

D. Phenyl hydrazone of glucosazone

Answer: C

**582.** Which molecule possess the general formula of carbohydrates, but is not a carbohydrate :

A. Glyceraldehydes

B. Arabinose

C. Acetic acid

D. All

#### Answer: C



583. An aldose is converted into its next higher

homologue by :

A. Ruff's method

B. Amadori rearrangement

C. Kiliani synthesis

D. None

Answer: C

584. Fructose is prepared commercially by ......

a polysaccharide which occurs in dahlia tubers

and Jerusalem artichokes :

A. Insulin

B. Cellulose

C. Lactose

D. None

Answer: A

585. When glucose reacts with bromine water,

the major product is :

A. Gluconic acid

B. Saccharin acid

C. Sorbitol

D. Galactose

Answer: A

586. Blood sugar is the same as,

A. Fructose

B. Galactose

C. Glucose

D. Glycogen

Answer: C

587. An essential constituent of plant is :

A. Cellulose

B. Glucose

C. Sugar

D. Raffinose

Answer: A

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588. Which enzyme hydrolyses triglyceride to

fatty acids and glycerol

A. Amylase

B. Maltose

C. Lipase

D. Pepsin

Answer: C

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#### 589. Cellulose is a:

A. Monosaccharide

B. Disaccharide

C. Polysaccharide

D. None

Answer: C



590. Which is not a reducing sugar :

## A. Fructose

B. Glucose

C. Lactose

D. Sucrose

Answer: D



591. Give the structure of the Saccharin and

write its one use.

A. Hexose

B. Reducing sugar

C. Glucoside

D. None

Answer: D

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**592.** Common table sugar is more formally described as

# A. Glucose

B. Lactose

C. Maltose

D. Sucrose

Answer: D

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**593.** Sucrose is made up of :

A. Glucopyranose and fructopyranose

B. A glucopyranose and d fructofuranose

# C. A glucopyranose and d fructofuranose

D. A glucopyranose and fructopyranose

Answer: B

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**594.** Glycogen is :

A. A polysaccharide found in both animals

and plants

B. Polysaccharide found in plants

# C. A polysaccharide found in animals

D. A polysaccharide found in honey

Answer: C

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595. Which is insoluble in water :

A. Glucose

B. Cellulose

C. Fructose

D. Sucrose

**Answer: B** 



596. Which does not contain carbohydrate :

A. Cellulose

B. Wax

C. Starch

D. Wheat flour

Answer: B

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# **597.** Human digestive system does not hydrolyse :

A. Starch

B. Maltose

C. Glycogen

# D. Cellulose

Answer: D

Watch Video Solution

**598.** The change in optical rotation with time of freshly prepared solutions of sugar is known as :

A. specific rotation

**B.** Inversion

C. Rotatory motion

D. Mutarotation

#### Answer: B



599. Which differs from the rest :

A. Glucose

B. Maltose

C. Sucrose

D. Lactose

Answer: A

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#### 600. Lactose has the same molecular formula

as:

A. Glucose

B. Maltose

C. Laevulose

# D. Galactose

Answer: B

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**601.** Dihydroxyacetone  $(CH_2OH, CO, CH_2OH)$  has the general formula of carbohydrate but not included in this class due to :

A. It does not contain polyhydroxy gp.

B. It does not contain aldehyde gp.

# C. It is not optically active

D. All

Answer: C

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# 602. The synthesis of carbohydrates in plants

is mainly due to :

A. Double decomposition

B. Photosynthesis

C. Hydrolysis of ingredients taken from soil

D. Nitrifying bacteria

Answer: B

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# 603. Glucose may be converted into fructose

by:

A. Osazone formation

- B. Lactone formation
- C. Kiliani synthesis

D. None

Answer: A

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**604.** The sugar present in fruits is :

A. Fructose

B. Glucose

C. Sucrose

D. Galactose

#### Answer: A



605. Artificial sweetener used in soft drink is :

A. Glucose

**B.** Fructose

C. cellulose

D. Aspartame

Answer: B

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**606.** Pyranose structure of glucose is

A. Hexagonal

**B.** Pentagonal

C. Linear

D. Tetrahedral





# 607. The main sugar present in honey is :

A. Sucrose

B. Glucose

C. Fructose

D. Maltose

Answer: A



# 608. The polymer formed with more than two

monosaccharide unit is known as :

A. Disaccharide

B. Polysaccharide

C. Both (a) and (b)

D. None

#### Answer: B





609. Which of the following is laevorotatory :

A. Glucose

B. Fructose

C. Sucrose

D. None

**Answer: B** 

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**610.** The reaction of glucose with redP + HI is called :

A. Sandmeyer's reaction

B. Reformatsky reaction

C. Gattermann reaction

D. Reduction

Answer: D

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611. The reagent used in Ruff degradation is :

A. Baeyer's reagent

- B. Tollen's reagent
- C. Fenton reagent
- D. Benedict's reagent

#### Answer: C



612. A solution of d-glucose in water rotates

the plane polarised light :

A. To the right

B. to the left

C. To either side

D. None

Answer: A

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#### **613.** Raffinose is :

A. Monosaccharide

B. Disaccharide

C. Trisaccharide

D. None

Answer: C



614. Amino acid present in insulin are:

A. 51

B. 15

C. 25

D. 475

Answer: A

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615. Which are not the essential constituents

of balanced diet:

A. Carbohydrates

B. Fats

C. Proteins

D. Hormones

Answer: D

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616. The hormone responsible for bolting is

A. Is secreted by pancreas

- B. Is secreted by thyroid
- C. Decreases blood sugar
- D. Does not stimulate metabolism

Answer: B

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617. Which one of the following proteins

transports oxygen in the blood stream:

A. Myoglobin

B. Insulin

C. Albumin

D. Haemoglobin

Answer: D

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**618.** Which is an amino acid:

A. Histidine

B. Glycine

C.  $\alpha$ -alanin

D. Threonin

Answer: B

Watch Video Solution

619. Which one is a test for proteins:

A. Brillstein test

B. Biuret test

C. Benedict's test

D. Molisch's test

#### Answer: B



**620.** The destruction of the biological nature and activity of proteins by heat or chemical agent is called:

A. Dehydration

- **B.** Denaturation
- C. Denitrogenation
- D. Deamination

Answer: B

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# **621.** Which of the following biomolecules

always contain nitrogen:

A. Carbohydrates

**B.** Proteins

C. Oils and fats

D. Waxes

Answer: B

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**622.** Proteins are polymer of amino acids . Which of the following is not a protein

A. Wool

B. Nail

C. Enzyme

D. Nucleoside

Answer: D

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# 623. Kwashiorkar is caused by the deficiency of:

A. Vitamins

B. Hormones

# C. Amino acids

D. Essential amino acids

#### Answer: C

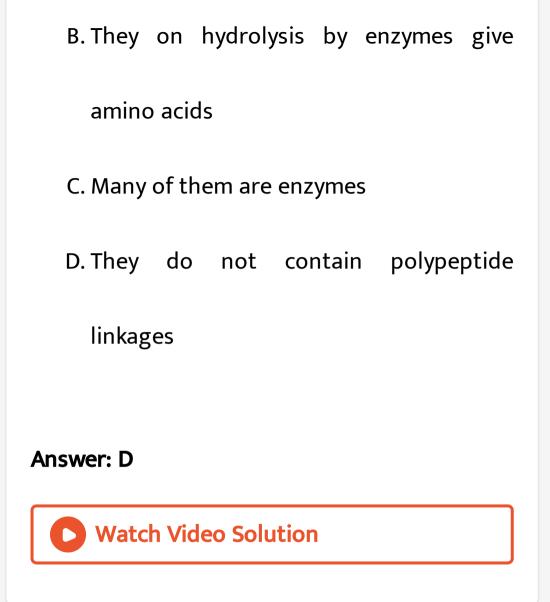


# 624. Point out of the wrong statement about

proteins:

A. They are nitrogenous organic

compounds of high molecular mass



625. Secondary structure of proteins refers to:

A. Mainly denatured proteins and structure

## of prosthetic group

B. Three dimensional structure specially

the bond between amino acid residues

that are distant from each other in

polypeptide chain

C. Linear sequence of amino acid residue in

the polypeptide chain

D. Regular folding patterns of continuous

portion of the polypeptide chain





626. Ascorbic acid is:

A. Vitamins C

B. Enzyme

C. Proteins

D. Lipid

Answer: A



**627.** The organic compounds of high physiological importance which are essential in small amounts for the well being of all human beings are:

A. Proteins

**B. Vitamins** 

C. Mineral salts

D. Enzymes





628. Vitamin A is also known as:

A. Xerophythol

B. Thiamine

C. Riboflavin

D. Pyridoxine

Answer: A



# 629. Deoxyribonucleic acid (DNA) is a polymer

of units called:

A. Sugars

B. Ribose

C. Amino acids

D. Nucleosides

#### Answer: D





**630.** Vitamin C deficiency may cause:

A. Beriberi

**B.** Rickets

C. Night blindness

D. Teeth & scurvy disease

Answer: D

**631.** The antisterility or anti reproductive vitamin is:

A. B

B.C

C. D

D. E

#### Answer: D

632. The aqueous solution of which vitamin is

dark pink in colour:

A.  $B_1$ 

 $\mathsf{B}.\,B_2$ 

 $\mathsf{C}.B_6$ 

D.  $B_{12}$ 

Answer: D



**633.** Which is fat soluble vitamin:

A. Vitamin A

B. Pyridoxine

C. Riboflavin

D. Thiamine

Answer: A

634. Citrus fruits are an important source of

vitamin:

A. B

B.C

C. D

D. K

**Answer: B** 

635. Which one of the following compounds is

not a vitamin:

A. Ascorbic acid

B. Thiamine

C. Testosterone

D. Riboflavin

Answer: C

636. Which vitamin contains N:

A. Vitamin A

B. Vitamin C

C. Vitamin B

D. Vitamin D

Answer: C

637. The chemical messenger produced in the

endocrine (duct-less) glands are grouped as:

A. Polypeptides

B. Hormones

C. Bile salts

D. Purines

Answer: B

638. Vitamin D is also known as:

A. Growth vitamin

B. Ascorbic acid

C. Reproductive vitamin

D. Sunshine vitamin

Answer: D

639. Which of the following vitamins contains

isoprene unit:

A. A

B.C

 $\mathsf{C}.\,B_2$ 

D. D

**Answer: A** 

640. Nucleotides and nucleosides mainly differ

from each other in :

A. Presence of phosphate units

B. Presence of base units

C. Presence of nucleic acids

D. None

Answer: A

641. Vitamin which is believed to cure common

cold is :

A. A

B.C

C. K

D. E

**Answer: B** 

642. Which of the following vitamins is present

# in cod-liver oil:

A. A

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

 $\mathsf{C}.\,B_1$ 

D. C

Answer: A



**643.** The vitamin that is most readily manufactured in our bodies is :

A. Vitamin A

B. Vitamin B

C. Vitamin C

D. Vitamin D

Answer: D

644. An example of a water soluble vitamin is :

A. Vitamin

B. Vitamin C

C. Vitamin D

D. Vitamin E

Answer: B



645. Deficiency of vitamin E causes:

A. Sterility

**B.** Rickets

C. Beri-Beri

D. Scurvy

Answer: A



**646.** The vitamin which is water soluble and antioxidant is :

A. Vitamin E

B. Vitamin D

C. Vitamin C

D. Vitamin  $B_1$ 

Answer: C

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647. A vitamin which plays a vital role in the

coagulating property of blood is :

A. Vitamin A

B. Vitamin D

C. Vitamin E

D. Vitamin K

Answer: D

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648. Scurvy is caused due to deficiency of :

A. Vitamin  $B_1$ 

B. Vitamin  $B_2$ 

C. Ascorbic acid

D. Glutamic acid

Answer: C

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649. Beri-Beri is caused due to :

A. Vitamin A

B. Vitamin  $B_1$ 

C. Vitamin C

D. Vitamin D

#### Answer: B



# 650. Which one of the following vitamins

deficiency causes rickets:

A. Vitamin A

B. Vitamin B

C. Vitamin C

D. Vitamin D

#### Answer: D



# 651. Which one of the following vitamins

contains a metal atom:

A. Riboflavin

B. Vitamin  $B_{12}$ 

C. Vitamin A

D. Vitamin $B_6$ 

#### Answer: B



652. Vitamin C is a :

A. Alcohol

B. Amide

C. Amine

### D. Lactone

Answer: A

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# **653.** Vitamin $B_1$ is chemically known as :

A. Ascorbic acid

B. Riboflavin

C. Pyridoxine

D. Thiamine

#### Answer: D



**654.** Deficiency of which vitamin can cause night blindness an eye disease:

A. Vitamin $B_6$ 

B. Vitamin C

C. Vitamin  $B_{12}$ 

D. Vitamin A





# 655. Which enzyme hydrolyses triglyceride to

# fatty acids and glycerol

A. Amylase

B. Maltase

C. Lipase

D. Pepsin





# 656. Which is not a poison for enzymes:

- A.  $CN^{-}$
- $\mathsf{B.}\,Fe^{3\,+}$
- $\mathsf{C.}\, Pb^{2\,+}$

D. 
$$As_4^{3\,-}$$

Answer: B



657. Vitamin A is present in :

A. Liver

B. Milk

C. Green vegetables

D. All

#### Answer: D

658. Which of the following contains vitamin

D:

A. Calciferol

B. Keratin

C. Tocopherol

D. None

Answer: A

**659.** Vitamin C is a :

A. Beans

B. Wheat

C. Carrots

D. Oranges

Answer: C



**660.** Which of the following is a vitamin:

A. Riboflavin

B. Thyroxine

C. Adrenaline

D. Guanine

Answer: A



**661.** Which of the following hormones helps in the conversion of glucose into glycogen in the body:

A. Insulin

B. Cortisone

C. Thyroxin

D. Oxytocin

Answer: A

**662.** The non-proteinaceous substances which certain enzymes require for their activity are called:

A. Catalysts

**B.** Inhibitors

C. Co-enzymes

D. Epimers

Answer: C

663. The substance constituting more than

80~% of cell contents is :

A. Protein

**B.** Mineral

C. Fat

D. Water

Answer: D

### 664. Cryoscopy is related with

A. Quick digestion

- B. Slow heartbeat
- C. Either of these
- D. None of these

### Answer: D



665. The conversion of glucose into glycogen

in liver is called:

A. Glycogenolysis

B. Glycogenesis

C. Glycolysis

D. Gluconeogenesis

#### Answer: B

666. Prolonged deficiency of nicotinic acid

(niacin) in human diet leads to:

A. Beri-Beri

B. Pellagra

C. Scurvy

D. Anaemia

Answer: B

667. The Ph of stomach is:

A. 7

B. 6

C. 10

D. 2

Answer: D



668. The energy stored in the cells of a living

body is in the form of:

A. Fats

B. Glucose

C. ATP

D. Proteins

Answer: C

**669.** Element found in plant systems which forms an important constituent of photosynthesis is:

A. Iron

B. Copper

C. Vitamins

D. Sodium

Answer: C

670. Which of the following disease is a STD?

A. Epilepsy

B. AIDS

C. Color blindness

D. Leucoderma

Answer: C



671. The principal buffer present in the blood

is:

### A. $CH_3COONH_4$

## $\mathsf{B.}\,CH_3COOH\,/\,CH_3COONa$

 $\mathsf{C}.\,H_2CO_3\,/\,HCO_3^-$ 

D.  $NaH_2PO_4Na_2HP_4$ 

#### Answer: C

672. The cells having membrane bound

nucleus are called:

A. Eukaryotic

B. Prokaryotic

C. Plant tissue cell

D. Animal tissue cell

Answer: A

673. Artificial gene was first synthesised by:

A. Khorana

- **B.** Watson and Crick
- C. Chargaff
- D. Wilkins

Answer: A



674. Which of the following is a female sex

hormone:

A. Adrenaline

B. Estrone

C. Cortisone

D. Testosterone

Answer: B

675. Hydrolysis of adenosine triphosphate,

involves rupture of:

A. Base-sugar bond

B. Sugar-phosphate bond

C. P-O-P bond

D. Consumption of the whole molecule

Answer: C

**676.** Oxygen balance in the atmosphere maintained through the process of:

A. Photosynthesis

B. Protein synthesis

C. Amino acid synthesis

D. Fat synthesis

Answer: A

677. Universal recipient in blood transfusion

belongs to the group:

A. Adrenaline

B. B

C. AB

D. 0

Answer: C

678. What are the end products of respiration:

A. Glucose $+CO_2$ 

B. Glucose  $+O_2$ 

 $\mathsf{C}.\,H_2O+CO_2$ 

 $\mathsf{D.}\, CO_2 + O_2$ 

Answer: C

**679.** Blood transports:

A. Oxygen

B. Carbon dioxide

C. Oxygen and carbon dioxide

D. None of the above

Answer: C

680. Which of the following is a genetic trait in

man:

A. Albinism

B. Leucoderma

C. Tuberculosis

D. Diphtheria

Answer: A

681. In which of the following steps largest

number of ATP are produced :

A. Glycolysis

B. Kreb's cycle

C. Hydrolysis

D. Terminal respiratory chain

Answer: B

682. The 'Y' shaped protein molecules involved

in the immune system are called:

A. Antigen

B. Immunoglobulin

C. Pathogens

D. None of the above

Answer: B

**683.** Haemophilia is a disease caused by

deficiency of:

A. RBCs

B. WBCs

C. Thromboplastin

D. Water in plasma

Answer: C

**684.** Carbohydrates have the general formula  $C_X(H_2O)_Y$ . Which of the following is not a carbohydrate:

A.  $C_{6}H_{16}O_{6}$ 

 $\mathsf{B.}\,C_6H_{10}O_5)_n$ 

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

 $\mathsf{D.}\, C_2 H_4 O_2$ 

### Answer: D



685. The general formula of carbohydrates is:

A.  $C_n H_{2n+1} O$ 

 $\mathsf{B.}\, C_n H_2 n O$ 

C.  $C_n(H_2O)_n$  or  $C_x(H_2O)_y$ 

D.  $C_n(H_2O)_2n$ 

Answer: C

686. Carbohydrates are stored in the body as :

A. Hydrates of carbon

B. Polyhydroxy aldehydes or, ketones

C. Polyhydroxy acids

D. None

Answer: B

687. Many of the carbohydrates are sweet in

taste because of:

A. They give sugars on hydrolysis

B. Covalent bonding

C. Electrovalent bonding

D. Coordinate bonding

Answer: A

**688.** Which carbohydrate is as important as steel and is employed in manufacture of many articles in daily use as well as most abundant in nature:

- A. Cellulose
- B. Glucose
- C. Starch
- D. Sucrose

Answer: A



689. Carbohydrate contains

A. -OH gp

# B. -CHO gp



D. All

### Answer: D

**690.** Aqueous solution of which carbohydrate give a dark blue colour with a few drops of iodine solution

A. Sucrose

B. Starch

C. Glucose

D. Fructose

Answer: B

**691.** Aqueous solution of carbohydrate with 2 drops of alcoholic solution of  $\alpha$ -napthol and  $H_2SO_4$  gives a ring at the junction . The colour of the ring is

A. Yellow

B. Green

C. Violet

D. Red

Answer: C

692. Which reagent is used for detection of

sugar in urine

A. Baeyer's agent

B. Ozonolysis

C. Fehling's agent

D. None

Answer: C

**693.** Starch can be used as an indicator for the detection of the traces of

A. Glucose in aqueous solution

B. Proteins in blood

C. lodine in aqueous solution

D. Urea in blood

Answer: C

**694.** Glucose cannot be classified as:

A. A hexone

- B. A carbohydrate
- C. An oligosaccharide
- D. An aldose

Answer: C

**695.** On heating with conc. $H_2SO_4$  sucrose gives:

A. CO and  $CO_2$ 

B. CO and SO-2

 $\mathsf{C}.\mathit{CO},\mathit{CO}_2\mathsf{and}SO_2$ 

D. None of the above

Answer: D

696. The letter D in carbohydrates represents

A. Its direct synthesis

B. Its dextrorotation

C. Its mutarotation

D. It configuration

Answer: D



697. Glucose reacts with methyl alcohol to give

- A.  $\alpha$ -methyl glucoside
- B.  $\beta$ -methyl glucoside
- C. Both (a) and (b)
- D. None

Answer: C

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698. The epimer of glucose is

A. Galactose

#### **B.** Fructose

C. Mannose

D. Arabinose

Answer: B

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**699.**  $\alpha$ -glucose and  $\beta$ -glucose are

A. Isomers

**B.** Anomers

C. Epimers

D. Tautomers

#### Answer: B



700. Glucose is

A. Monosaccharide

B. Disaccharide

C. Trisaccharide

D. Polysaccharide

#### Answer: A

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#### 701. Fructose contains

- A. 50H groups
- B. 3 secondary alcoholic groups
- C. 2 primary alcoholic group and keto gp

#### D. All





# **702.** Which of the following is a disaccharide:

A. Sucrose

B. Glucose

C. Fructose

D. Starch

Answer: A



**703.** Cane sugar on hydrolysis yields:

- A. Glucose and maltose
- B. Glucose and lactose
- C. Glucose and fructose
- D. Only glucose

Answer: C

**704.** Glucose gives the silver mirror test with ammoniacal solution of silver nitrate because it contains :

A. Aldehydes gp

B. Ester gp

C. Ketone gp

D. Amide gp

#### Answer: A

**705.** Glucose and fructose are :

A. Chain isomers

**B.** Position isomers

C. Functional isomers

D. Optical isomers

Answer: C

706. Glucose and fructose differ in :

A. Taste

- B. Action of heat
- C. Action of Tollen's reagent
- D. Direction of optical rotation

Answer: D

707. Direct conversation of starch into glucose

may be carried out by:

A. Fermentation with diastase

B. Fermentation with zymase

C. Heating it with dil. HCL

D. Fermentation with maltose

Answer: C

708. Which is sweet among known sugars,

A. Sucrose

**B.** Fructose

C. Glucose

D. Lactose

**Answer: B** 

709. The ultimate product of the hydrolysis of

starch is :

A. Glucose

**B.** Fructose

C. Sucrose

D. None

Answer: A

710. Glucose and fructose are readily

distinguished by using :

A. Molisch test

B. Salivanoff test

C. Tollen's reagent

D. None of these

Answer: B

711. Identify the product Z in the following

:

series of reactions  $C_6H_{12}O_6 \xrightarrow{HCN} X \xrightarrow{H_2O} Y \xrightarrow{HI} Z$ 

A. Hexanoic acid

B.  $\alpha$ -methyl caproic acid

C. Heptanoic acid

D. None of these

Answer: C

**712.** Invert sugar is :

A. Chemically inactive form of sugar

B. Equimolecular mixture of glucose

fructose

C. Mixture of glucose and sucrose

D. A variety of cane sugar

#### Answer: B

713. Milk sugar is ( a disaccharide):

### A. Sucrose

Β.

C. Fructose

D. Glucose

Answer: B



**714.** Which of the following is a ketohexose:

# A. Glucose

- **B.** Fructose
- C. Sucrose
- D. Starch

Answer: C



715. The reagent used to distinguish between

starch and sugar solution is:

A. Ammoniacal silver nitrate

- B. Fehling's solution
- C. Benedict's solution
- D. Iodine solution

Answer: A

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716. Starch is polymer of:

A. Fructose

B. Glucose

C. Lactose

D. None

Answer: B

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**717.** When sucrose is heated with Fehling's solution, the product formed is:

A. Saccharic acid

B. Oxalic acid

C. Formic acid

D. Invert sugar

Answer: D

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**718.** Which does not react with Fehling.s solution:

A. Acetaldehyde

B. Benzaldehyde

C. Glucose

D. Formic acid

Answer: B

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**719.** Starch is changed into disaccharides in presence of:

A. Diastage

B. Maltase

C. Lactase

D. Zymase

#### Answer: C

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# 720. Glucose is hydrolysed by zymase into:

A. Dicarboxylic acid

B. Alcohol

C. Amino acids

D. Aromatic acids

#### Answer: C



721. How are you able to test sugar in a given

sample of wine:

A. By Molisch's test

B. By Dunstan's test

C. By Biuret test

D. By Legal's test

#### **Answer: B**



# 722. which carbohydrate serves as reserve

glucose in body?

A. Sucrose

B. Starch

# C. Glycogen

D. Fructose

#### Answer: C



# 723. Acetyl derivative of which carbohydrate is

used in sizing industry:

A. Glucose

**B.** Fructose

C. Lactose

D. Starch

#### Answer: B



# **724.** The carbohydrates are important constituent of our diet, they function as:

A. Bio fuels of provide energy

B. Shock absorbing pad

C. Heat insulator

D. None

#### Answer: C



**725.** Glucose forms many derivatives. The derivative which will help to prove the furanose structure is:

A. Osazone

B. Benzoyl

C. Acetyl

D. Isopropylidene

Answer: C

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**726.** A compound of non-sugar and glucose which yields glucose on hydrolysis found in plants, is called:

A. Alkoxide

B. Glucoside

C. Glycoside

D. None of these

Answer: B

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727. An essential constitution of a diet is:

# A. Starch

B. Glucose

C. Carbohydrate

D. Cellulose

Answer: B

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728. Which carbohydrate is used in silvering of

mirrors:

A. Sucrose

B. Starch

C. Glucose

D. Fructose

Answer: B

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729. Glucose gives many reactions of aldehyde

because:

A. It is hydrolysed to acetaldehyde

B. It is a polyhydroxy ketone

# C. It is a cyclic aldehyde

D. It is a hemiacetal in equilibrium with its

aldehyde form in solution

Answer: B

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730. Amylose is a polymer of:

A.  $\alpha$ -D glucopyranose

**B.** Fructose

C.  $\beta$ -fructose

D.  $\beta$ -D fructose

Answer: D

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**731.** The ultimate products of oxidation of most of hydrogen and carbon in food-stuffs are:

A.  $H_2O$  alone

B.  $CO_2$  alone

C.  $H_2O$  and  $CO_2$ 

D. None of these

Answer: D

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**732.** It is best to carry out reactions with sugars in neutral or acid medium not in alkaline medium. This is because in alkaline

medium sugar undergoes one of the following

changes.

A. Decomposition

B. Inversion

C. Rearrangement

D. Racemization

Answer: A

**733.** The calorific values of fats, carbohydrates and proteins vary in the order:

A. Fats gt Carbohydrates gt Proteins

B. Fats gt Proteins gt Carbohydrates

C. Carbohydrates gt Proteins gt Fats

D. Proteins gt Carbohydrates gt Fats

Answer: B

734. Proteins mainly contain:

A. C, H, O and N

B. Only C and H

C. C, H and O

D. N and H

**Answer: B** 

**735.** A substance gives ninhydrin test. It is most likely a:

A. Lipid

B. Vitamin

C. Shock absorber

D. Protein

Answer: A

#### 736. Proteins are composed of:

A. Nucleotides

B. Nucleosides

C. Dipeptides

D. Amino acids

Answer: C

**737.** In human body enzymes hydrolyse protein into:

A. A ketogenic aids like  $CH_3COCOOH$ 

B. A hydroxy acid like  $CH_3CHOHCOOH$ 

C. Dicarboxylic acid like COOHCOOH

D. Amino acids like  $CH_2NH_2COOH$ 

Answer: D

738. Which statement about protein is wrong:

A. Proteins occur in all living cells

B. Proteins invariably contain N, O, C and H

C. Proteins are synthesised by plant

kingdom only

D. Proteins are also synthesised in

laboratory

Answer: D

739. Proteins do not respond to:

A. Biuret test

B. Lucas test

C. Ninhydrin test

D. Xanthoproteic test

Answer: B

**740.** Amino acids usually exist in the form of Zwitterions which consist of:

A. The basic group  $-NH_2$  and the acidic group -COOHB. The acid group  $-NH_3^+$  and the basic group  $CO_2^-$ C. The acid group  $CO_2^+$  and the acidic

D. No acidic or basic group

group  $NH_3^-$ 





# **741.** A compound of formula $NH_2CH_2COOH$ may behave:

- A. Only as an acid
- B. Only as a base
- C. Both acid and base
- D. Neither acid nor base

#### Answer: B



# **742.** The helical structure or a secondary structure of proteins is stabilized by:

A. Peptide bonds

B. Dipeptide bonds

C. H-bond

D. None





**743.** The sequence in the structure of nucleic acid is:

A. Base + phosphate group + pentose

B. Phosphate group + pentose + base

C. Pentose + base + phosphate group

D. All





# **744.** Who pointed out peptide linkage in proteins:

A. Kekule

B. Hofmann

C. Fisher

D. Cannizzaro





### 745. Protein can be most easily removed by:

A. Alkanes

**B.** Alkenes

C. Alkynes

D. Benzene

Answer: C



**746.** Point out the correct statement about proteins:

A. They are nitrogenous organic

compounds of high molecular weights

B. They on hydrolysis by enzyme give amino

acids

C. Many of them are enzymes

D. All





### 747. One of the essential alpha amino acids is:

A. Lysine

- B. Glycine
- C. Serine
- D. Proline





# **748.** Which of the following contains the highest percentage of proteins:

A. Groundnut

- B. Cow's milk
- C. Egg
- D. Wheat

#### Answer: B





### 749. The proteins are hydrolysed with acids,

alkalies or enzymes finally to:

A. Amino acids

**B.** Ethers

C. Esters

D. Cycloparaffins

#### Answer: D

750. The main structural feature of protein is:

A. The ester linkage

B. The ether linkage

C. The peptide linkage

D. All of the above

Answer: A

751. The enzyme pepsin hydrolyses:

A. Proteins to amino acids

B. Fats to fatty acids

C. Glucose to ethyl alcohol

D. Polysaccharides to monosaccharides

Answer: D

752. Protein is an important constituent of our

diet. It functions mainly as:

A. A source of energy

B. Construction material

C. Shock absorber

D. Reserve food

Answer: D

753. The end product of protein digestion is:

A. Amino acids

B. Glucose

C. Glycerol

D. Oxalic acid

Answer: C

**754.** The energy change produced by the combustion of foods is called the calorific value.. The best calorific value is given by:

A. Proteins

B. Fats

C. Carbohydrates

D. Vitamins

Answer: C

**755.** Biuret test is used for the detection of:

A. Saturated oils

**B.** Sugars

C. Proteins

D. Fats

Answer: B



756. Proteins give:

A. A violet colour with alkaline  $CuSO_4$  solution

B. Form a purple colour on boiling with

dilute ninhydrin solutions

C. Yellow colour on boiling with  $HNO_3$ 

D. All

Answer: C

**757.** Which of the following is proteins:

A. Terry cotton

B. Natural silk

C. Nylon

D. Reyon

Answer: A

758. Which is an amino acid:

A. Glycine

B. Valine

C. Lysine

D. All

Answer: A

**759.** Which of the following is a simple protein?

A. Albumin

B. Globulin

C. Glutenin

D. All

Answer: B

760. Which is a protein:

A. Gelatin

B. Casein

C. Plasma protein

D. All

Answer: A

761. Which of the following have coiled helical

structure:

A. Proteins

**B.** Lipids

C. Carbohydrates

D. Vitamins

Answer: C

762. Globular proteins are present in:

### A. Bood

B. Eggs

C. Milk

D. Body fluids

Answer: B



763. Keratin, a structural protein is present in:

A. Hair

B. Skin

C. Wool

D. Horn

Answer: C

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764. The protein is responsible for transport of

oxygen in the bloodstream is

- A. Haemoglobin
- B. Insulin
- C. Collagen
- D. Albumin

Answer: A



# **765.** Which of the following is not a classification of proteins

#### A. Enzymes

- **B.** Antibiotics
- C. Antigens
- D. Hormones

#### Answer: B



# 766. Which protein is main constituent of milk

### A. Keratin

B. Casein

C. Myosin

D. Insulin

Answer: B

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**767.** On heating with conc.  $HNO_3$  proteins give yellow colour. This test is called

A. Oxidising test

B. Xanthoproteic test

C. Hoppe's test

D. Acid base test

Answer: B

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# 768. Naturally occuring polymer of amino acids

is

A. Polythene

B. PVC

#### C. Proteins

 $\mathsf{D.}\,CH_3COOH$ 

#### Answer: C

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# **769.** Proteins are polymer of amino acids . Which of the following is not a protein

A. Wool

B. Nails

C. Hair

D. DNA

Answer: D

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770. Molecular weight of a protein is

A. 10000

B. 1,000-10,000

C. 100-1,000

D. gt10,000

#### Answer: D



## 771. A Protein that controls the metabolism of

glucose is

A. Oxytocin

B. Insulin

C. Haemoglobin

D. Keratin

### Answer: B



772. Insulin, a protein acts as

A. An antibody

B. A hormone

C. An enzyme

D. A transport agent

Answer: B

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## 773. Protein which acts as hormone is

A. Casein

B. Oxytocin

C. Trypsin

D. Keratin





# 774. Decarboxylation of glycine yields

- A.  $CH_4$
- $\mathsf{B.}\,CH_3COOH$
- $\mathsf{C.}\,CH_3NH_2$
- D. Ethanamide





# 775. The purine base present in RNA is

A. Guanine

B. Thymine

C. Cytosine

D. Uracil

Answer: D

**776.** Which vitamin is closely involved in the formation of collegent-protein present in connective tissues and bones

A. Riboflavin

B. Ascorbic acid

C. Niacin

D. Cyanocobalamin

Answer: B

**777.** Simple proteins bonded with a nonprotein prosthetic group (acting as cofactor) are called

A. Simple proteins

B. Conjugated proteins

C. Proteonic proteins

D. None

Answer: B

# **778.** Which of the following is a conjugated protein

- A. Glucoprotein
- B. Phosphoprotein
- C. Chromoprotein
- D. All are correct

Answer: D



**779.** Proteins give a white precipitate with Millon's reagent, which is

A. Mercurous and mercuric nitrate in  $HNO_3$ 

B. Mercurous and mercuric chloride in *HCL* 

C. Mercurous and mercuric chloride in

 $HNO_3$ 

D. None





780. Blood protein is

A. Albumin

- B. Haemoglobin
- C. Both (a) and (b)

D. None





781. Microbes are present in

A. Wool

B. Silk

C. Nails

D. Skin



782. Compounds containing both  $-NH_2$  and

-COOH groups are called

A. Proteins

B. Dicarboxylic acids

C. Amino acids

D.  $\alpha$ -hydroxy acids

Answer: C

**783.** The pH value of a solution in which a polar amino acid does not migrate under the influence if electric field is called

A. Isoelectronic points

B. Isoelectric point

C. Neutralisation point

D. None

Answer: A

784. Two reactions are said to be coupled if

## A. Both $\delta G_1$ and $\delta G_2$ are negative

B.  $\delta G_1$  is positive but  $\delta G_2$  is negative

C.  $\delta G_1$  and  $\delta G_2$ 

D. None of the above

Answer: B



785. The no. of polypeptide chains present in a

molecule of haemoglobin is

A. One

B. Two

C. Three

D. Four

Answer: D

786. The Ph of blood is (approximately)

A. 7.4

B. 5.2

C. 11.3

D. 9.6

Answer: A



787. Hyperglycemia refers to

A. High blood sugar level

B. High salt conc. In blood

C. High blood pressure

D. Low sugar level in blood

Answer: A

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788. Digestion of fat in intestine is aided by :

A. Diffusion

**B.** Protection

C. Peptization

D. Emulsification

Answer: D

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## 789. Which of the following is the female sex

hormone

A. Estrone

B. Testostrene

C. Cortisone

D. Thyroxine

Answer: A

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790. The hydrolysis of starchy foods begins in

the mouth by enzymes present in saliva . The

enzymes are

A. Amylase

**B.** Protease

C. Ptyalin

D. Maltase

Answer: C

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791. Enzymes trypsin converts

A. Proteins into  $\alpha$ -amino acids

B. Starches into sugar

C. Glucose into glycogen

D.  $\alpha$ -amino acids into proteins

Answer: A

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792. The primary products of photosynthesis

in green plants . It contains the element

A. Fructose

B. Glucose

C. Maltose

D. Cellulose

Answer: B

Watch Video Solution

# 793. Chlorophyll is the green colouring matter

of plant . It contains the element

A. Sodium

B. Potassium

C. Magnesium

D. Manganese

Answer: C

Watch Video Solution

794. Which of the following is provitamin A

A. Carotene

B. Calciferol

C. Ascorbic acids

D. Ergosterol

### Answer: A



# 795. The green pigment of plants essential for

the formation of carbohydrates by

photosynthesis is

A. Acrophyll

B. Lyphyll

C. Chlorophyll

D. None of the above

Answer: C

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**796.** Which of the following regulates the metabolism of sugars

A. Thyroid

B. Insulin

C. Hydrocortisone

D. None

Answer: B

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# 797. In the chemical sense digestion is basically

A. Hydrolysis

B. Anabolism

C. Hydrogenation

D. Dehydrogenation

### Answer: A



## 798. Deficiency of calcium leads to

A. Anaemia

B. Tetany

C. Scurvy

D. Rickets

Answer: D

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**799.** The ultimate products of oxidation of most of the hydrogen and carbon in food - stuffs are

A. Water only

B. Carbondioxide only

C. Water and carbon dioxide

D. None of these

### Answer: C

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800. Zinc is a constituent of

A. Enzymes

B. Insulin

C. Tissues

D. All are correct

### Answer: D

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## 801. Which is involved in blood clotting

A. Fibrinogen

B. Pepsinogen

C. Trypsinogen

D. None





# **802.** Deficiency of which metal ion causes anaemia

A. Zn

B. Fe

C. Mg

D. Na

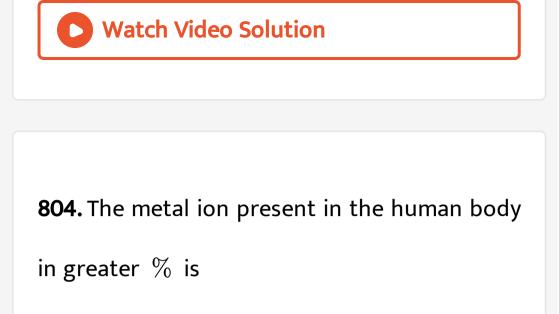




803. The metal ions present in body fluids are

- A. Sodium, Potassium, Calcium
- B. Sodium ,Calcium
- C. Potassium , Zinc
- D. Magnesium , Iron

Answer: A



- A. Ca
- B. Na
- C. K
- D. Fe

#### Answer: A





805. White blood cells act as

- A. As source of energy
- B. For blood clotting
- C. As defence against infection
- D. As a medium for oxygen transport from

lungs to tissues

## Answer: C

806. Nucleoside involves the combination of

A. Sugar + base + $H_3PO_4$ 

B. Sugar + base

C. Sugar + acid

D. None

**Answer: B** 

**807.** Water is important to living being because

- A. It is a compound of hydrogen and oxygen
- B. It can be obtained in pure form
- C. It is a good solvent and its boiling point

is moderately high

D. It is colourless liquid

Answer: C

808. A gene is a segment of a molecule of

A. DNA

B. m-RNA

C. t-RNA

D. Protein

**Answer: A** 

**809.** Protein synthesis in living cells is also called

A. Transcription

**B. Translation** 

C. Replication

D. Duplication

Answer: B

810. Which of the following gives maximum

energy in metabolic process

A. Proteins

B. Carbohydrates

C. Vitamins

D. Fats

Answer: D

**811.** The chemical change in a DNA molecule that leads to the synthesis of proteins with different amino acids sequence is called

A. Allergy

**B.** Mutation

C. Transcription

D. Metabolism

Answer: B

**812.** Which of the following is molecular disease ?

A. Allergy

B. Cancer

C. Measles

D. Sickle cell anaemia

Answer: D

**813.** The nutrient used in the body as a source of energy as a raw material for growth and repair is

A. Fat

B. Carbohydrates

C. Proteins

D. Vitamins

Answer: C

814. The intermediate compound in the

conversion of starch to glucose is :

A. Lactose

B. Maltose

C. Fructose

D. Sucrose

**Answer: B** 

815. Molisch's test is used for :

A. Monosaccharides

**B.** Disaccharides

C. Polysaccharides

D. All

Answer: D



816. Number of possible isomers of glucose is :

A. 10

B. 14

C. 16

D. 20

Answer: C

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817. Glycogen on hydrolysis gives :

A. Starch

B. Amylopectin

C. Amylose

D. Glucose

Answer: D

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818. Carbohydrates are stored in the body as :

A. Sugars

B. Starch

C. Glucose

D. Glycogen

## Answer: D



# 819. The enzyme that hydrolyses cellulose into

glucose is :

A. Invertase

B. Zymase

C. Lactase

D. Emulsion

### Answer: D



# 820. Which of the following is a disaccharide:

A. Lactose

B. Starch

C. Cellulose

## D. Fructose

Answer: A

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**821.** In fermentation by zymase, alcohol and  $CO_2$  are obtained from :

A. Glucose

B. Invert sugar

C. Fructose

D. All

Answer: A

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822. Glycogen is :

A. Monosaccharides

B. Disaccharides

C. Trisaccharide

D. Polysaccharide

## Answer: D



**823.** Which of the following are all disaccharides:

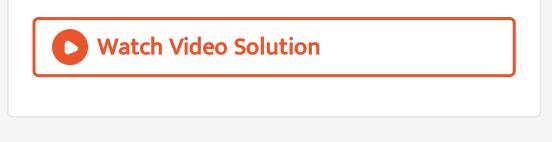
A. Maltose, sucrose, lactose

B. Maltose, lactose, glucose

C. Glycogen, lactose, sucrose

D. Starch, maltose, lactose





# 824. Monosaccharides containing ketonic

group are called :

A. Aldoses

**B. Ketoses** 

C. Sucrose

D. Cellulose





# 825. Raffinose on hydrolysis forms :

A. Glucose

- **B.** Fructose
- C. Galactose
- D. All

Answer: D



# 826. Which of the following enzymes are used

to convert starch into alcohol :

A. Maltose, diastase

B. Invertase, Zymase

C. Diastase, maltase, zymase

D. Invertase, diastase, zymase

### Answer: C





**827.** Glucose is used in :

A. Manufacture of vitamin C

B. As preservative

C. In the manufacture of alcohol

D. All

**Answer: D** 

828. Glucose gives test with :

A. Tollen's reagent

B. Fehling's solution

C. Benedict's solution

D. All

Answer: D



829. Which is used to identify glucose :

A. Neutral ferric chloride

B.  $CHCI_3 + KOH$ (alc.)

C. Ammoniacal  $AgNO_3$ 

 $\mathsf{D.}\, C_2 H_5 ONa$ 

Answer: C

830. Acetone may be obtained from starch by

the action of :

A. Acid

B. Bacteria

C. Oxidising agent

D. None

**Answer: B** 

**831.** How many atoms are there in pyranose ring:

A. 5

B. 3

C. 6

D. 7

Answer: C

832. Which does not show mutarotation :

A. Glucose

B. Fructose

C. Both (a) and (b)

D. Sucrose

Answer: D

**833.** Glucose reacts with acetic anhydride to from :

A. Monoacetate

B. Tetra acetate

C. Penta acetate

D. Hexa acetate

Answer: C

834. Which of the following monosaccharide is

pentose :

A. Glucose

B. Fructose

C. Arabinose

D. Galactose

Answer: C

**835.** Glucose contains :

- A. One-CHO group
- B. Five -OH groups

C. One primary alcoholic group and four

secondary alcohol groups

D. All are correct

#### Answer: D

**836.** Oligosaccharides contain \_\_\_\_ simple sugar units :

A. 2 to 10

B. 4 to 8

C. 6 to 12

D. 6 to 10

Answer: A

837. Monosaccharides usually contain :

- A. 3 to 8 carbon atoms
- B. 5 to 8 carbon atoms
- C. 2 to 10 carbon atoms
- D. 6 to 10 carbon atoms

Answer: A

838. Emil Fischer was awarded Nobel Prize for

his work on :

A. Sugars and purine synthesis

B. Ammonia discovery

C. Optical activity

D. Alkaloid synthesis

## Answer: A

839. Maltose is made up of :

A. α-D glucose

B.  $\alpha$  and  $\beta$ -D glucose

C. Glucose and fructose

D. Fructose only

Answer: A

840. Carbohydrates containing more than 10

simple units of sugar are called :

A. Monosaccharides

B. Disaccharides

C. Trisaccharide

D. Polysaccharide

Answer: D

841. Now carbohydrates are regarded as :

A. Aromatic compounds

B. Polyfunctional compounds

C. Alicyclic compounds

D. Polysaccharide

Answer: B

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

water gives :

A. Sorbitol

**B.** Fructose

C. Saccharic acid

D. Gluconic acid

Answer: A

843. The important monosaccharides are :

A. Aldoses

**B. Ketoses** 

C. Aldoses and ketoses

D. None

Answer: C

844. Which of the following is oligosaccharide

A. Sucrose

:

B. Maltose

C. Lactase

D. All

Answer: D

845. Which is polysaccharide:

A. Nylon

B. Polyethene

C. Glucose

D. Cellulose

Answer: D

846. Monosaccharides containing aldehyde

group are called :

A. Aldoses

B. Ketoses

C. Polysaccharides

D. Disaccharides

#### Answer: A

**847.** The colour of the precipitate formed when a reducing sugar is heated with Fehling's solution is :

A. Brown

B. Red

C. Blue

D. Green

Answer: B

**848.** Glucose and cane sugar can be distinguished by:

A. Fehling's solution

B. Baeyer's reagent

C. Molisch's test

D. lodine solution

Answer: A

**849.** A certain compound gives negative test with ninhydrin, but positive test with Benedict.s solution. The compound is :

A. Protein

B. Monosaccharide

C. Lipid

D. Amino acid

Answer: B

**850.** Epimers are pair of diastereoisomeric aldoses which differ only in configuration at position :



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

#### **Answer: B**



851. Which of the following sugars is present

in genetic factor DNA molecule :

A. Glucose

B. Maltose

C. Ribose

D. Deoxyribose

Answer: D

**852.** Cellulose, starch and glycogen are the polysaccharides having \_\_\_\_ monosaccharide unit:

A. Glucose

B. Ribose

C. Fructose

D. Pentose

Answer: A

**853.** Colour of osazone of glucose is :

A. Red

B. Brown

C. Yellow

D. Orange

Answer: C



854. Fehling.s solution and Benedict.s solution

are reduced by glucose to form :

A. CuO

 $\mathsf{B.}\,Cu_2O$ 

 $\mathsf{C}. Cu(OH)_2$ 

D. Cu

**Answer: B** 

855. When glucose is heated with nitric acid,

the product is :

A. Gluconic acid

B. Glucaric acid

C. Glycolic acid

D. Oxalic acid

Answer: B

856. Starch is made up of:

- A. Glucose and fructose
- B. Amylose and amylopectin
- C. Amylose and glycogen
- D. Amylopectin and glycogen

Answer: B

857. Which of the following carbohydrate is

synthesised by nature on the largest scale :

A. Glucose

**B.** Fructose

C. Lactase

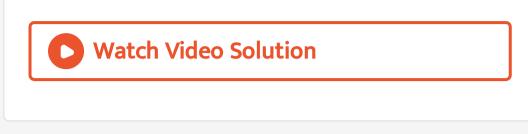
D. Cellulose

**Answer: D** 

**858.** Cane sugar is made of :

A. 5	membered	glucose	ring	and	5
membered fructose ring					
B. 6	membered	glucose	ring	and	6
membered fructose ring					
C. 6	membered	glucose	ring	and	5
membered fructose ring					
D. 6	membered	glucose	ring	and	6
membered fructose ring					





**859.** Glycogen and amylopectin have :

- A. Same structure
- B. Similar structure but differ in branching

of glucose chain

C. Similar structure but differ in their

solubility in water

D. Similar structure but they are stored in

different parts of the body

Answer: B

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860. The carbon chain in fructose is identified

by converting in into:

A. α-methyl hexane

B. Cyclohexane

C. n-hexane

D.  $\alpha$ -methyl caproic acid

Answer: C

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**861.** Formation of amylene oxide ring in glucose is an indication that ring in glucose is at:

A.  $C_1$  and  $C_5$ 

B.  $C_2$  and  $C_5$ 

C.  $C_3$  and  $C_6$ 

D.  $C_2$  and  $C_4$ 

Answer: A

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**862.** The polysaccharide used in the manufacture of paper is:

A. Cellulose

B. Starch

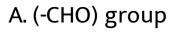
C. Glucose

D. Sucrose

Answer: A

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**863.** Methylation of glucose with dimethyl sulphate indicates the presence of following group in glucose :





- C. (-OH) group
- D. None

#### Answer: C



**864.** Which of the following elements are necessary for maintaining fluid balance in the body:

- A. Calcium and magnesium
- B. Potassium and sodium
- C. Iron and magnesium
- D. None of the above

Answer: B

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**865.** The store house for all biological information is :

A. RNA

B. m-RNA

C. DNA

D. None of the above

Answer: C

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866. What is not true for enzymes :

A. They are powerful biocatalysts

B. They are all proteins

## C. They are highly specific in their action

D. They do not lose activity on heating

Answer: D

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**867.** Which one is the complementary base of adenine in one strand to that in the other strand of DNA:

## A. Cytosine

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

#### Answer: D



868. Which one is the complementary base in

RNA strand to the adenine base in DNA during

protein synthesis:

### A. Adenine

- B. Guanine
- C. Uracil
- D. Cytosine

#### Answer: D



869. The enzyme that hydrolyses casein of milk

into paracasein is:

### A. Renoline

- B. Rennin
- C. Replication
- D. Renil

### Answer: B



# 870. Which of the following is not a pyrimidine

base :

## A. Thymine

- B. Guanine
- C. Cytosine
- D. Uracil

Answer: B



871. The process of formation of RNA from

DNA is known as :

A. Translation

- **B.** Transcription
- C. Replication
- D. Mutation

Answer: A

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**872.** Ribose sugar is a component of :

#### A. DNA

B. RNA

C. Glucose

D. Wax

Answer: B

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873. The enzyme present in saliva is :

A. Pepsin

**B.** Peptidase

C. Lipase

D. Ptyalin

### Answer: D



874. Antibodies are

A. Carbohydrates

**B.** Proteins

C. Phospholipids

D. Lipids

Answer: B

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### 875. Pancreatic juice contains the enzyme :

A. Zymase

**B.** Invertase

C. Diastase

D. Lipase





**876.** Which of the following statements about enzymes is incorrect :

A. The catalytic action of an enzyme is not specific

B. An enzymatic reaction is highly sensitive

to temperature

C. The catalytic action of enzymes is due to

their capacity to lower the energy of

activation of a particular reaction

D. None of these

Answer: A

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877. Which of the following is not present in

RNA :

A. Ribose

B. Uracil

C. Thymine

D. Phosphate

Answer: C

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878. Deoxyribonucleic acid (DNA) consists of

the following units:

- A. Peptides
- B. Glucosides
- C. Nucleotides
- D. Deoxyribose

#### Answer: C

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879. The sugar part of DNA is :

A. Glucose

B. Sorbose

C. Ribose

D. Deoxyribose

Answer: D

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**880.** Redness of blood is because of the presence of :

A. Iron in haeme pigment

### B. Haemoglobin

# C. Copper in haeme pigment

D. All

Answer: A

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**881.** Which of the following compounds is responsible for the transmission of heredity characters:

A. RNA

**B. DNA** 

C. Glucose

D. Haemoglobin

Answer: B

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882. With which one of the pollutant gases in

air, haemoglobin of blood undergoes

causing death. The gas is :

A. Carbon monoxide

B. Carbon dioxide

C. Sulphur dioxide

D. Ozone

Answer: A

883. A chemical substance acts as the currency

of energy metabolism in a cell. It is :

A. Adenosine triphosphate

B. Adenosine diphosphate

C. Adenosine monophosphate

D. Glucose

Answer: A

**884.** Which statement is not correct for an enzyme :

A. It acts as a biocatalyst

B. Its aqueous solution is colloidal

C. It can catalyse any chemical reaction

D. Its catalytic efficiency is temperature

dependent

Answer: C

**885.** An antigen develops antibodies which protect the body from their harmful effects. The antibodies are :

A. Immunoglobulins

B. Phospholipids

C. Albumins

D. Lymphocytes

Answer: A

**886.** In blood, the transport of oxygen from lungs to tissues is carried out by :

A. White blood cells (leukocytes)

B. Red blood cells (erythrocytes)

C. Fibrinogen

D. Globulins

Answer: B

#### 887. DNA molecule consists of units of:

A. Base-sugar

- B. Base-sugar-phosphate
- C. Base-phosphate
- D. None of these

Answer: B



888. The antibodies necessary to protect new

born babies from infection are derived from:

A. Cow's milk

B. Pasteurised milk

C. Mother's milk

D. Honey

Answer: C

889. The red colouring matter of blood which

transports oxygen contains an element in a

system of rings. The element is :

A. Iron

B. Magnesium

C. Cobalt

D. Calcium

Answer: A

**890.** Which of the following statements is incorrect?

A. Two polynucleotide chains pointing in

opposite directions are coiled to from a

double helix

- B. Both helixes are right handed
- C. The helixes have ten nucleotides in each

turn

D. The two chains are not complementary

to each other

#### Answer: D



**891.** Oxygen, necessary for life on earth was formed in atmosphere as a result of :

A. Eradication of ozone

B. Photosynthesis

C. Electric discharge on water

D. None of the above





# **892.** Rice has deficiency of the essential amino acid:

A. Alanine

B. Glycine

C. Lysine

D. Leucine

#### Answer: C



**893.** Which of the following base is linked is one strand of DNA to cytosine of the other strand by hydrogen bonds :

A. Guanine

B. Adenine

C. Thymine

D. Uracil

#### Answer: C



**894.** The simple prokaryotic cells evolved when life began on earth. Which of the following nutrients used for evolving more complex eukaryotic cells:

A.  $CO_2$ 

B.  $N_2$ 

C.  $CO_2$  and  $N_2$ 

 $\mathsf{D}.\,O_2$ 

#### Answer: C

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**895.** Which parts of amino acid molecules are linked through hydrogen bonds in the secondary structure of proteins :

A.-SH group

B. (-COOH )group

C. C=O and -NH groups

D. Alkyl group

#### Answer: C

:



# 896. The structure of RNA molecule consists of

A. Double helix

B. Single helix

C. Single strand

D. Branched chain

#### Answer: C



## 897. The main point of difference between DNA

and RNA is :

A. Presence of thymine is DNA and RNA

B. Presence of deoxyribose and thymine in

DNA, ribose and uracil in RNA

C. Presence of ribose and thymine in DNA,

deoxyribose and uracil in RNA

D. Presence of deoxyribose in DNA and

ribose in RNA

Answer: B

**898.** Insulin has 51 amino acids in two polypeptide chains which are linked by :

A. One sulphide bond

B. One disulphide bond

C. Two disulphide bonds

D. Three disulphide

Answer: C

#### 899. The function of DNA is :

A. Protein synthesis

B. Self replication

C. Store of hereditary information

D. All of the above

Answer: D

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900. The purine base present in DNA is :

# A. Adenine

- B. Cytosine
- C. Uracil
- D. Thymine

Answer: A



**901.** Which of the following is not present in nucleotide :

# A. Guanine

- B. Cytosine
- C. Adenine
- D. Thyroxine

#### Answer: D



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

- A. Transport oxygen
- B. Provide immunity
- C. Catalyse Biochemical reaction
- D. Provide energy

#### Answer: C



903. DNA has deoxyribose and base and third

compound is :

A. Phosphoric acid

B. Ribose

C. Adenine

D. Thymine

Answer: A

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**904.** Which of the following elements is responsible for oxidation for water to  $O_2$  in the biological process?

A. Fe

B. Mn

C. Cu

D. Mo

Answer: A

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905. Enzymes are :

A. Catalysts

B. Fatty acids

C. Proteins

D. Carbohydrates

Answer: C

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## 906. Which one of the following is not present

in RNA?

A. Thymine

B. Ribose

C. Uracil

D. Phosphate

Answer: A

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907. The disease .diabetes mellitus. is caused

by the deficiency of :

A. Iodine

B. Insulin

C. Phenyl alanine hydroxylase

D. Lysine

Answer: B

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**908.** The hormone used as an oral contraceptive is :

A. Aldosterone

B. Cortisone

C. Progesterone

D. Testosterone

Answer: C

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909. Bleeding gums are caused by deficiency of

A. Thiamine

•

B. Ascorbic acid

C. Folic acid

D. Vitamin E

Answer: B

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910. The hormone insulin is a secretion of the

organ:

A. Ovary

**B.** Testes

C. Adrenal cortex

D. Pancreas

Answer: D

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911. Increased blood pressure may be caused

by excess secretion of :

A. Thyroxin

B. Testosterone

C. Estradiol

D. Adrenalin

Answer: D

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912. Biological catalyst (enzymes ) belong to :

A. Polysaccharides

B. Synthetic polymers

C. Polypeptides

D. Poly nitrogen heterocycles

Answer: C

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**913.** Which is not member of vitamin B complex group :

A. Retinol

B. Thiamine

C. Riboflavin

D. Pyridoxine

#### **Answer: A**



# **914.** Which of the following nutrients is increased on sprouting the pulses such as sprouted black gram or bengal gram

A. Vitamin A

B. Vitamin B

C. Vitamin C

D. Iron

Answer: D

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# 915. The science of using microorganisms for

the beneficial effects in industries is called:

A. Biotechnology

B. Genetic engineering

C. Enzymology

D. Microbiology

Answer: B

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## 916. All except one may be caused by a virus:

A. Poliomyelitis

B. Influenza

C. Malaria

D. Small pox

#### Answer: C

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### 917. The chief constituents of biological

membranes are:

A. Proteins

B. Waxes

C. Triglycerides

D. phospholipids

#### Answer: C



# 918. A disease can often be transmitted by

polluted water is:

A. Rabies

B. Typhoid

C. Common cold

D. Malaria

#### Answer: B



#### 919. Most viruses are composed of:

A. Proteins

B. Proteins and nucleic acid

C. Cellulose and fat

D. fats and proteins

Answer: B

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# **920.** Deficiency of sodium and potassium causes:

A. Muscular cramps

B. Headache

C. Diarrhoea

D. All are correct

#### Answer: D

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921. Progesterone is a:

A. Steroid hormone

B. Proteins hormone

C. Vitamin

D. Alkaloid





# 922. Which carbohydrate cannot be

metabolised by human being:

A. Maltose

B. Cellulose

C. Amylose

D. Amylopectin





923. Saliva contains:

A. Amylases

B. Bite

C. Vitamins

D. Trypsin

**Answer:** A



# **924.** Bile juice aids in the digestion and absorption of fats because it contains:

A. Bile pigment

B. Lipase

C. Cholesterol

D. Bile salts

Answer: D





**925.** which component of the typical birth control pill is responsible for regulating the menstrual cycle:

A. Androgen

B. Estrogen

C. Progestin

D. Oxytocin







**926.** The human body does not produce:

A. Enzymes

B. Vitamins

C. Proteins

D. Oxytocin

**Answer: B** 

927. OXY-haemoglobin contains:

A. Less oxygen than haemoglobin

B. More oxygen than haemoglobin

C. Contains more carbon dioxide

D. Contains less carbon dioxide

Answer: B

**928.** Glucose is stored in the liver in the polysaccharide form called:

A. Starch

B. Amylopectin

C. Cellulose

D. Glycogen

Answer: D

929. The digestion of starch by the enzyme

amylase occurs in:

A. Stomach

B. Liver

C. Muscles

D. Small intestine

Answer: D

930. Which of the following is a female sex

hormone:

A. Estrogen

**B. Estradiol** 

C. Progesterone

D. All of the above

Answer: D

#### 931. Emulsification of fat is brought about by:

A. Bile pigment

B. Bile salts

C. Hydrochloric acid

D. Pancreatic juice

Answer: B

932. Disease caused by under secretion of

adrenal cortex is:

A. Cretinism

B. Dwarfism

C. Sterility

D. Addison's disease

#### Answer: D

933. All digestive enzymes are:

A. Ligases

**B.** Oxidases

C. transferases

D. Hydrolases

Answer: D



934. Cellophane is made from :

### A. Cellulose

- B. Phenol
- C. Gum
- D. Petroleum

#### **Answer: A**

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**935.** Monosaccharides are :

#### A. Sweet

B. Sour

C. Tasteless

D. Offensive

Answer: A

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936. An example of disaccharide made up of

two units of the same monosaccharides is :

A. Maltose

B. Sucrose

C. Lactose

D. None

Answer: A

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**937.** Ring structure of glucose is due to formation of hemiacetal and ring formation between :

A.  $C_1$  and  $C_5$ 

B.  $C_1$  and  $C_4$ 

C.  $C_1$  and  $C_3$ 

D.  $C_3$  and  $C_4$ 

Answer: A



**938.** The charring product formed when  $C_6H_{12}O_6$  is heated with conc. $H_2SO_4$  is due to

- A. Oxidation
- **B. Reduction**
- C. Dehydration
- D. Dehydrogenation

Answer: C



939. To become a carbohydrate, a compound

must contain atleast :

#### A. 6 carbons

- B. 3 carbons
- C. 4 carbons
- D. 2 carbons

#### Answer: B



**940.** Which of the following gives reddish brown precipitate with dilute solution of resorcinol in dilute HCI:

### A. Glucose

**B.** Fructose

C. Lactose

D. Maltose

Answer: B

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941. Lactose on hydrolysis yields :

A. Two glucose molecules

B. Two galactose molecule

### C. A galactose and fructose molecule

D. A galactose and a glucose molecule

Answer: D

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# **942.** Which statement about ribose is incorrect :

A. A polyhydroxy compound

B. An aldehyde sugar

C. Has six carbon atoms

D. Exhibits optical activity

Answer: C

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**943.** The number of atoms in the ring structure of pyranose is :









#### Answer: A

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# **944.** Main constituents of the cell walls of plants is :

A. Cellulose

B. Glycogen

C. Lactose

D. Chlorophyll

Answer: A

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**945.** Dextrins  $(C_6H_{10}O_5)$  are used in :

A. Making adhesive

**B.** Confectionary

# C. Sizing paper

D. All

#### Answer: D



946. Animal starch is the name given for :

A. Glycogens

B. Lactogens

C. Cellulose

D. None

Answer: A

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# **947.** Cellulose trinitrate is used in preparation of :

A. Food

**B. Explosives** 

C. Rayon

D. None

Answer: B

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948. Cellulose is a linear polymer of :

A.  $\alpha$  glucose

B.  $\beta$  glucose

C.  $\alpha$  fructose

D. None





**949.** Glycogen is a branched polymer of :

A.  $\alpha$  glucose

B.  $\beta$  glucose

C.  $\alpha$  fructose

D. None

Answer: A



950. Gums are :

A. Polysaccharides of more than one type

of monosaccharides

B. Used as thickening agent

C. Used for improvement of texture in food

industry

D. All





### **951.** Which are called biomolecules :

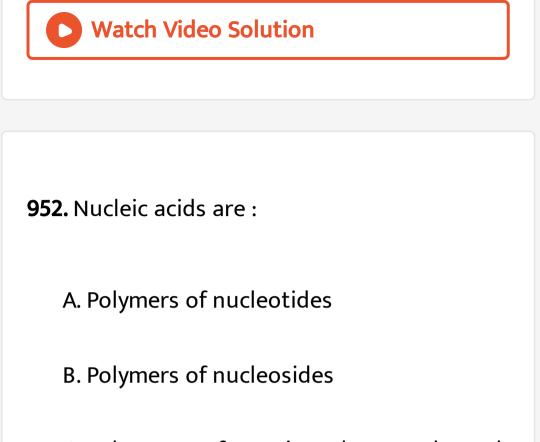
A. Carbohydrate

B. Protein

C. Lipids

D. All

Answer: D



C. Polymers of purine bases through

phosphate ester bonds

D. Phosphate ester bonds







# 953. The process of respiration in absence of

oxygen is called :

A. Metabolic

B. Aerobic

C. Anaerobic

D. Glycolysis

### Answer: C

**954.** Which of the following body parts is not composed of structural proteins :

A. Muscle

B. Nails

C. Bones

D. Skin and bone matrix

Answer: B

**955.** One mole of glucose on respiration produces :

A. 36 mole of ATP

B. 34 mole of ATP

C. 40 mole of ATP

D. 38 mole of ATP

Answer: A

contains iodine :

A. Adrenalin

B. Testosterone

C. Thyroxine

D. Insulin

Answer: C

957. The ph of fluid in the stomach is :

A. 2.0

 $\mathsf{B.}\,7.0$ 

C. 4.2

D. 9.2

Answer: A



**958.** The purine bases present in both DNA and RNA are :

A. Guanine and adenine

B. Guanine and uracil

C. Adenine and thymine

D. Cytosine and uracil

Answer: A

959. Bases common to DNA and RNA are :

A. Adenine, cytosine ,uracil

B. Guanine , adenine , cytosine

C. Guanine, uracil, thymine

D. Adenine , thymine , guanine

Answer: B



960. Nucleic acids contain :

- A. 4 purine bases
- B. 4 pyrimidine bases
- C. 2 purine bases and 3 pyrimidine bases
- D. 4 pyrimidine bases and one purine base

Answer: C

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961. Adenosine is an example of :

A. Nucleotide

B. Nucleoside

C. Purine base

D. Pyrimidine base

Answer: B

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# **962.** Which of the following is a protein hormone?

A. Insulin

B. Oxytocin

C. BOTH (A) AND (B)

D. None

Answer: C

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963. The chemical messenger produced in the

endocrine (duct-less) glands are grouped as:

A. Vitamins

B. Lipids

C. Antibiotics

D. Hormones

Answer: D

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**964.** The function of DNA is :

A. To synthesise RNA

B. To synthesise the necessary proteins

C. To carry the hereditary characteristics

from generation to generation

D. All are correct

Answer: D

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965. Which of the following base is found only

in RNA and not in DNA :

A. Thymine

B. Uracil

C. Adenine

D. Guanine

Answer: B

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## 966. The element present in traces in insulin is

:

B. Cobalt

C. Zin

D. Magnesium

Answer: C

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967. The base present only in RNA and not in

DNA is :

A. Uracil

B. Cytosine

C. Thymine

D. Guanine

Answer: A

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**968.** The hormone which maintains blood sugar level is :

A. Oxytocin

B. Haemoglobin

C. Insulin

D. Ptylin

Answer: C

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**969.** A compound which catalyses a chemical reaction in a living organism is called a (n) :

A. Carbohydrate

B. Enzyme

C. Lipid

D. Vitamin

Answer: B

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**970.** Hormones function as :

A. Chemical messengers

B. Coenzymes

# C. Provitamins

D. All

#### Answer: A



**971.** Enzyme trypsin converts:

A. Amino acids into proteins

B. Glucose into glycogens

C. Starch into sugar

D. Proteins into amino acids

Answer: D

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**972.** The enzyme carbonic anhydrase catalyses the change :

A. Carbonic acid to  $H_2O$  and  $CO_2$ 

B. Lactose to glucose and galactose

C. Maltose to glucose

D. None

Answer: A

:

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# **973.** CO- factors (non- protein prosthetic groups) used to bond conjugated proteins are

A. Carbohydrates

B. Phosphoric acid

C. Iron pigments

D. All the correct

#### Answer: D

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# 974. Which of the following is proteolytic

enzyme:

A. Insulin

B. Diastase

C. Pepsin

D. Adenine

#### Answer: C



975. Photosynthesis in plants is brought about

by chlorophyll. It involves :

A. Conversion of chemical energy into

radiant energy

B. Conversion of chemical energy into

mechanical energy

C. Conversion of solar energy into chemical

energy

D. Conversion of mechanical energy into

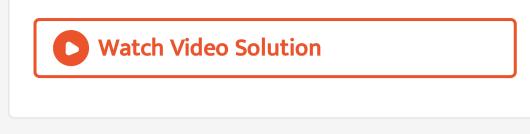
solar energy

Answer: C

976. In DNA the complementary bases are :

A. Adenine and thymine , guanine and cytosine B. Uracil and adenine , cytosine and guanine C. Adenine and guanine, thymine and cytosine D. Adenine and thymine , guanine and uracil





**977.** Mutations arise due to :

A. Infection by microorganisms

- B. Abrupt changes in genes
- C. Hybridisation
- D. Dominant character of one of the

parents





# 978. Sudden hereditary change is called :

A. Meiosis

B. Mitosis

C. Mutation

D. None

Answer: C



**979.** DNA dictates synthesis of :

A. Proteins

B. Lipids

C. Carbohydrates

D. Glucose

Answer: A

**980.** The set of reaction in a cell which help in degradation of macromolecules is called :

A. Metabolism

B. Anabolism

C. Catabolism

D. All of the above

### Answer: C

**981.** Which of the following is not a biotechnology product :

A. Interferon

B. Human insulin hormone

C. Vaccines

D. Cortisone

Answer: D

982. Respiration ultimately results in :

A.  $CO_2 + O_2$ 

B. Glucose +  $O_2$ 

C. Glucose +  $CO_2$ 

D.  $CO_2N + H_2O$ 

Answer: D

**983.** Biological reactions associated with positive  $\Delta G$  values are called :

A. Exergonic

B. Endergonic

C. Exothermic

D. Endothermic

Answer: B

984. The process photosynthesis cannot occur

in the absence of :

A. Chlorophyll

B. Oxygen

C. Catalyst

D. None

Answer: A

**985.** During respiration , food is oxidised to carbon dioxide in the presence of oxygen . This process is called :

A. Aerobic

B. Anaerobic

C. Anabolism

D. Catabolism

Answer: A

**986.** Degradation of one mole of glucose provides :

A. 36 mole of ATP

B. 10 mole of ATP

C. 315 mole of ATP

D. 3 mole of ATP

Answer: A

987. Interferon is a product of biotechnology

and is used against :

A. Viral diseases

**B. Diabetes** 

C. Sickle cell anaemia

D. Haemorrhage

Answer: A

988. Blood clots due to :

A. RBC

B. WBC

C. Platelets

D. Globulins

Answer: C

**989.** Miller synthesised simple amino acids from:

A.  $H_2, NH_3, CH_4, H_2O$ 

 $\mathsf{B}.\, H_2,\, O_2,\, N_2,\, H_2 O$ 

 $\mathsf{C}.\,CH_4,O_2,N_2,SO_2$ 

 $\mathsf{D}.\, NH_3, O_2, CO_2, HCN$ 

#### **Answer: A**

990. A codon on the mRNA has :

A. One base

B. Two base

C. Three base

D. Variable number of bases

Answer: C

991. Which of the following is an example of

zwitterion :

A. Urea

B. Glycine hydrochloride

C. Ammonium acetate

D.  $\alpha$ -alanine

Answer: D

992. Among the latest discovery in cytology is :

A. Respiration

B. Genetic code

C. Enzyme

D. None

Answer: B



993. An example of natural biopolymer is :

A. Teflon

B. Nylon-6,6

C. Rubber

D. DNA

Answer: D

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**994.** Enzymes, in the living systems:

A. Provide energy

B. Provide immunity

C. Transport oxygen

D. Catalysed biochemical process

Answer: D

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995. The pH of the blood does not appreciably

change by small addition of an acid or a base

because blood :

A. Contains serum protein which acts as a

butter

B. Contains iron as a part of the molecule

C. Can be coagulated easily

D. Is a body fluid

Answer: A

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996. Enzymes :

temperature

B. Consists of nucleic acids

C. Carbohydrates

D. Have all these properties

Answer: A

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997. In nucleic acids, the sequence is :

- A. Phosphate-sugar-base
- B. Sugar-base-phosphate
- C. Base-sugar-phosphate
- D. Base-phosphate-sugar

Answer: C