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KIPS LMS CTS TEST SESSION 2020

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TEST

Self Assessment Test (Unit-2)

50 Questions

40 min

Topics

SAT Tests Unit (Biological Molecules)

Start Test

39 : 43

Q 1/50 40 min Hint

Q : These are most abundant organic compounds to be found in cells:

A Carbohydrates

B Proteins

C Lipids

D Water

1 2 3 4 5 6 7

39 : 41

Q 2/50 40 min Hint

Q : What does a hemoglobin molecule contain?

A Four Fe^{2+} attached to each haem group

B Four oxygen molecules attached to each haem group

C Four polypeptide chains each with four attached haem groups

D Four polypeptide chains each with one attached haem group

1 2 3 4 5 6 7

39 : 38

Q 3/50 40 min Hint

Q : All of the following elements are present in all carbohydrates except:

A Carbon

B Oxygen

C Hydrogen

D Nitrogen

1 2 3 4 5 6 7

39 : 37

Q 4/50 40 min Hint

Q : Which term most appropriately describes catalase, collagen and haemoglobin?

A Enzymes

B Fibrous proteins

C Globular proteins

D Polypeptides

1 2 3 4 5 6 7

39 : 35

Q 5/50 40 min Hint

Q : Which property of proteins enables them to act as pH buffers?

A They are soluble

B They contain carboxyl and amino groups

C They have a high molecular mass

D They possess both secondary and tertiary structure

1 2 3 4 5 6 7

39 : 34

Q 6/50 40 min Hint

Q : _____ has unbranched chains of glucose and is soluble in hot water.

A Amylose

B Amylopectin

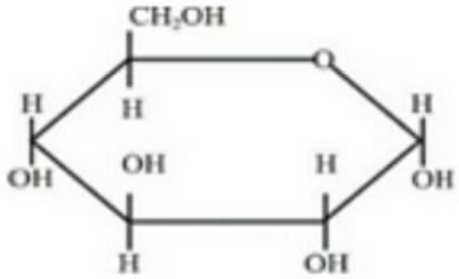
C Glycogen

D Cellulose

1 2 3 4 5 6 7

39 : 18

The diagram shows a ring structure of glucose. Which form of glucose is shown and in which molecule is it present?



A m of glucose where p
α Cellulo

B ı of glucose where pr
α Starch

C n of glucose where pı
β Cellulos

D rm of glucose where ı
β Starch

1 2 3 4 5 6 7

39 : 16

Q 8/50 40 min Hint

Q : Silk protein is present in:

A Nail

B Plant cell wall

C Hair

D Spider's web

4 5 6 7 8 9 10

39 : 14

Q 9/50 40 min Hint

Q : All of the following are true about lipids except:

A They store high amount of energy

B They play important role in insulation

C They are polymers of fatty acids

D They are mostly hydrophobic in nature

4 5 6 7 8 9 10

39 : 13

Q 10/50 40 min Hint

Q : Property of water important for thermo-stabilization:

A Highly reactive

B Non polar

C Specific heat capacity

D Solubility

4 5 6 7 8 9 10

39 : 11

Q 11/50 40 min Hint

Q : Evaporation of 2ml of water, lowers the temperature of remaining 998 ml by:

A $2\ C^0$

B $1\ C^0$

C $5C^0$

D $10\ C^0$

6 7 8 9 10 11 12

39 : 10

Q 12/50 40 min Hint

Q : Lipids which are abundant in membranes:

A Acylglycerols

B Terpenoids

C Waxes

D Phospholipids

6 7 8 9 10 11 12

39 : 08

Q 13/50 40 min Hint

Q : All are true about ATP except:

A Energy currency of cell

B Contains three high energy bonds

C Contains ribose sugar

D Contains three phosphate groups

9 10 11 12 13 14

39 : 07

Q 14/50 40 min Hint

Q : A DNA fragment contains ACGT nucleotide sequence in one strand. How many hydrogen bonds will it make with other strand?

A 8

B 10

C 12

D 6

9 10 11 12 13 14

39 : 05

Q 15/50 40 min Hint

Q : Adenine and guanine are:

A Main nitrogenous bases of nucleic acids

B Main nitrogenous bases of phospholipids

C Main nitrogenous wastes of humans

D Main types of amino acids in proteins

11 12 13 14 15 16

39 : 04

Q 16/50 40 min Hint

Q : Secondary structure of DNA duplex is maintained by:

A Phosphodiester linkage

B Ionic bond

C Hydrogen bond

D Hyperphobic interaction

11 12 13 14 15 16

39 : 02

Q 17/50 40 min Hint

Q : 3/ end of nucleic acids have always a free _____group.

A Phosphate

B Hydroxyl

C Carboxylic

D Amino

13 14 15 16 17 18

39 : 00

Q 18/50 40 min Hint

Q : This is not true about DNA molecule

A Double polymer

B Secondary structure

C One groove in each turn

D Constant diameter

13 14 15 16 17 18

38 : 57

Q 19/50 40 min Hint

Q : Form of polysaccharide stored in bacteria and animals:

A Starch

B Glycogen

C Cellulose

D Chitin

15 16 17 18 19 20 21

38 : 56

Q 20/50 40 min Hint

Q : A structural protein is:

A Pepsin

B Haemoglobin

C Collagen

D Immunoglobulin

15 16 17 18 19 20 21

38 : 54

Q 21/50 40 min Hint

Q : Which of the following are single ringed structures?

A Cytosine, thymine and Adenine

B Adenine, Guanine and Cytosine

C Cytosine, Guanine and thymine

D Cytosine, Thymine and Uracil

15 16 17 18 19 20 21

38 : 52

Q 22/50 40 min Hint

Q : A famous sugar found in genetic material is:

A Hexose sugar

B Pentose sugar

C Tetrose sugar

D Triose sugar

18 19 20 21 22 23 24

38 : 50

Q 23/50 40 min Hint

Q : Nitrogen bases of nucleotides in RNA are attached to:

A Sugar molecules

B Phosphate radicals

C Nucleoside

D Deoxyribose

18 19 20 21 22 23 24

38 : 49

Q 24/50 40 min Hint

Q : Cross links of double helix of DNA are formed of:

A Sugar molecules

B Phosphate radicals

C Complementary nitrogen bases

D Similar nitrogen bases

8 19 20 21 22 23 24

38 : 47

Q 25/50 40 min Hint

Q : Regulatory sites other than active site, present over the enzymes are called:

A Active sites

B Catalytic groups

C Binding site

D Allosteric sites

0 21 22 23 24 25 26

38 : 45

Q 26/50 40 min Hint

Q : Which one is found only in RNA?

A Cytosine

B Adenine

C Uracil

D Guanine

0 21 22 23 24 25 26

38 : 44

Q 27/50 40 min Hint

Q : A monosaccharide is:

A Lactose

B Sucrose

C Ribose

D Maltose

23 24 25 26 27 28 2

38 : 42

Q 28/50 40 min Hint

Q : The most common carbohydrate monomer is:

A Maltose

B Lactose

C Glucose

D Galactose

23 24 25 26 27 28 2

38 : 41

Q 29/50 40 min Hint

Q : Which forms nails, hair and feathers?

A Fibrin

B Keratin

C Collagen

D Elastin

23 24 25 26 27 28 29

38 : 40

Q 30/50 40 min Hint

Q : DNA is directly involved in the synthesis of all except:

A DNA

B Protein

C tRNA

D mRNA

26 27 28 29 30 31 3

38 : 38

Q 31/50 40 min Hint

Q : Immediate source of energy is:

A Sucrose

B Glucose

C Fat

D Starch

26 27 28 29 30 31 3

38 : 37

Q 32/50 40 min Hint

Q : Which one is correct base pairing for DNA molecule?

A Cytosine - Uracil

B Thymine - Guanine

C Adenine - Thymine

D Thymine – Uracil

26 27 28 29 30 31 32

38 : 35

Q 33/50 40 min Hint

Q : In one strand of DNA, the base sequence is CATGACTAG. What is the base sequence on the other strand?

A CATTAGGAC

B GATGTCACT

C GAUCUGAUC

D GTACTGATC

29 30 31 32 33 34 3

38 : 34

Q 34/50 40 min Hint

Q : Number of oxygen atoms in lipid molecules is always _____ as compared to number of carbon atoms.

A Less

B More

C Equal

D Double

29 30 31 32 33 34 3

38 : 32

Q 35/50 40 min Hint

Q : Two amino acid monomers are joined by:

A Hydrogen bond

B Peptide bond

C Phosphodiester bond

D Ester bond

29 30 31 32 33 34 35

38 : 30

Q 36/50 40 min Hint

Q : Unsaturated fats are made saturated by:

A Polymerization

B Hydrogenation

C Dehydrogenation

D Hybridization

32 33 34 35 36 37 38

38 : 29

Q 37/50 40 min Hint

Q : A peptide chain attains secondary structure through the formation of:

A Peptide bond

B Ionic bond

C Hydrogen bond

D Disulphide bond

32 33 34 35 36 37 38

38 : 27

Q 38/50 40 min Hint

Q : Specificity of an enzyme is determined by:

A Number and sequence of amino acids

B Charge on substrate

C pH of environment

D Charge and shape of active site

32 33 34 35 36 37 38

38 : 25

Q 39/50 40 min Hint

Q : An activated enzyme consisting of polypeptide chain and a cofactor is called:

A Apoenzyme

B Coenzyme

C Holoenzyme

D Proenzyme

4 35 36 37 38 39 40

38 : 23

Q 40/50 40 min Hint

Q : Activators are usually derived from:

A Vitamins

B Proteins

C Carbohydrates

D Metal ions

4 35 36 37 38 39 40

38 : 21

Q 41/50 40 min Hint

Q : At a certain point where conversion of substrate/s into product/s is maximum, the enzyme/s would be:

A Free

B Activated

C Denatured

D Saturated

37 38 39 40 41 42 4

38 : 19

Q 42/50 40 min Hint

Q : A three dimensional cavity bearing a specific charge by which the enzyme reacts with its substrate is called:

A Active site

B Catalytic site

C Binding site

D Allosteric site

37 38 39 40 41 42 4

38 : 18

Q 43/50 40 min Hint

Q : Which step causes activation of catalytic site of an enzyme?

A Change in pH of enzyme

B Change in the shape of substrate

C Formation of ES complex

D Change in temperature

37 38 39 40 41 42 43

38 : 16

Q 44/50 40 min Hint

Q : In a naturally occurring chemical reaction, all active sites are occupied, the rate of reaction would be:

A Minimum and constant

B Maximum and accelerating

C Zero and constant

D Constant and maximum

9 40 41 42 43 44 45

38 : 15

Q 45/50 40 min Hint

Q : All of the following pairs contain keratin except:

A Hooves& Horns

B Hair & Nails

C Skin & Feathers

D Muscles & Bones

9 40 41 42 43 44 45

38 : 13

Q 46/50 40 min Hint

Q : Excessive increase in temperature of medium causes the enzyme molecule to be:

A Activated

B Denatured

C Unaffected

D Inactivated

41 42 43 44 45 46 47

38 : 12

Q 47/50 40 min Hint

Q : Inhibitors are chemically:

A Metals

B Inorganic

C Organic

D All A, B, C

41 42 43 44 45 46 47

38 : 09

Q 48/50 40 min Hint

Q : Optimum temperature of enzymes present in human body is:

A 27°C

B 47°C

C 37°C

D 30°C

44 45 46 47 48 49 50

38 : 08

Q 49/50 40 min Hint

Q : Inhibitors which block the enzyme by forming weak bond are called:

A Competitive inhibitors

B Irreversible inhibitors

C Non- competitive inhibitors

D Reversible inhibitors

44 45 46 47 48 49 50

38 : 07

Q 50/50 40 min Hint

Q : Malonic acid is an example of:

A Irreversible inhibitor

B Competitive inhibitor

C Reversible inhibitor

D Non-competitive inhibitor

44 45 46 47 48 49 50

TEST

Test Level-3 (Unit-2)

50 Questions

40 min

Topics

TL-3 Unit (Biological Molecules)

Start Test

39 : 57

Q 1/50 40 min Hint

Q :
What is the theoretical number of chemically different dipeptides that may be assembled from 12 different types of amino acids?

A 24

B 72

C 144

D 400

1 2 3 4 5 6 7

39 : 56

Q 2/50 40 min Hint

Q : Which polysaccharides are branched and which are unbranched?

A Branched (Amylose), Unbranched (Glycogen)

B Branched (Amylopectin), Unbranched (Cellulose)

C Branched (Cellulose), Unbranched (Amylose)

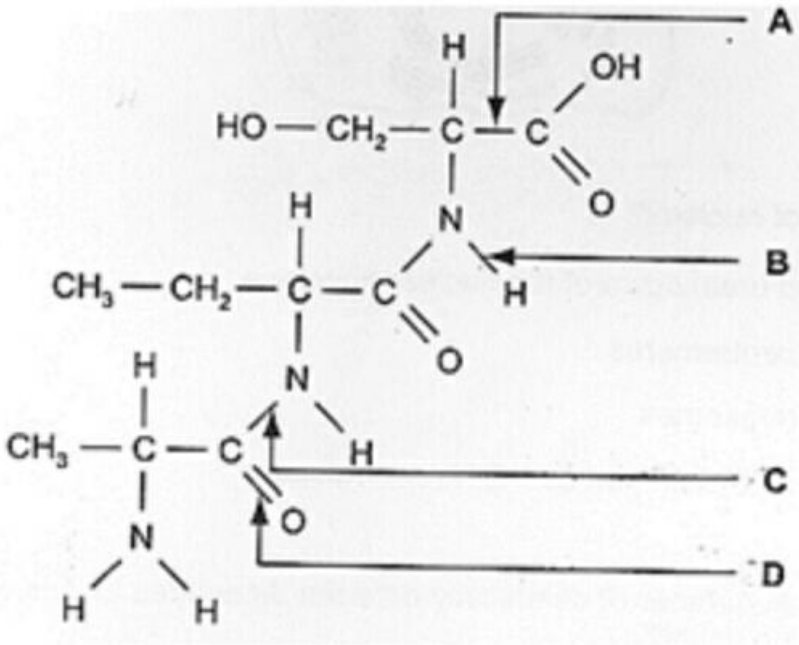
D Branched (Glycogen), Unbranched (Amylopectin)

1 2 3 4 5 6 7

39 : 51

The diagram shows a molecule.

Which arrow labels a peptide bond?



A A

B B

C C

1 2 3 4 5 6 7

39 : 48

Q 4/50 40 min Hint

Q : How many haem groups are there in one molecule of human haemoglobin?

A 1

B 2

C 3

D 4

1 2 3 4 5 6 7

39 : 46

Q 5/50 40 min Hint

Q : Which substance contains carbon, hydrogen, oxygen and nitrogen?

A Collagen

B Glycogen

C Amylopectin

D Triglyceride

1 2 3 4 5 6 7

39 : 43

Q :

A metabolic pathway is

Reactant $\xrightarrow{\text{enzyme1}}$ Substance X $\xrightarrow{\text{enzyme2}}$ Substance Y $\xrightarrow{\text{enzyme3}}$ End product

What would be the effect of adding a small amount of a non-competitive inhibitor for enzyme 2?

A. Enzyme 2 would be partially denatured.

B. Substance X would increase in concentration.

C. Substance Y would no longer be formed.

D. The initial reactant would no longer be metabolized.

39 : 40

Q 7/50 40 min Hint

Q : Which of the following would give negative result on Benedict test?

A Glucose

B Fructose

C Maltose

D Sucrose

1 2 3 4 5 6 7

39 : 37

Q 8/50 40 min Hint

Q :

During the production of apple juice, enzymes are used to break down the components of the cell walls.

Which carbohydrate will be produced by this hydrolysis?

A Amylose

B Cellulose

C Glucose

D Glycogen

3 4 5 6 7 8 9

39 : 36

Q 9/50 40 min Hint

Q : What are the features of glycogen?

A Contains nitrogen, Branched molecule, Structural role in cell

B Contains nitrogen, Unbranched molecule, Structural role in cell

C Does not contain nitrogen, Branched molecule, Storage form in cell

D Does not contain nitrogen, Unbranched molecule, Storage form in cell

3 4 5 6 7 8 9

39 : 34

Q 10/50 40 min Hint

Q : What is the name of the bond joining glycerol and a fatty acid in the formation of a monoglyceride?

A Ester

B Glycosidic

C Hydrogen

D Peptide

5 6 7 8 9 10 11

39 : 32

Q 11/50 40 min Hint

Q :

Certain insects are able to stand on the surface of ponds.

Which property of water allows them to do this?

A Adhesion with other molecules

B Cohesion between water molecules

C Low viscosity

D Maximum density at 4°C

5 6 7 8 9 10 11

39 : 30

Q 12/50 40 min Hint

Q : Which term describes the type of bonding responsible for stabilizing the secondary structure of a protein?

A Disulphide

B Hydrogen

C Hydrophobic

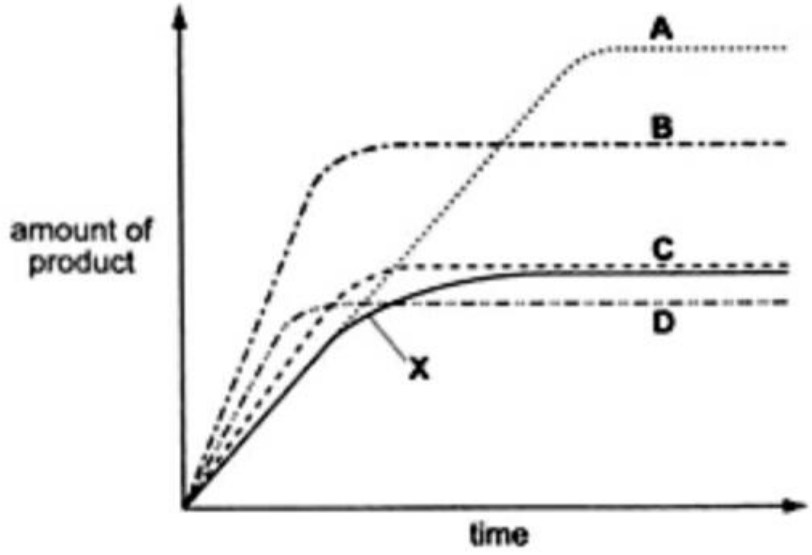
D Ionic

7 8 9 10 11 12 13

39 : 27

The curve X shows the activity of an enzyme at 20 °C. Curves A to D show the effect of different conditions on the activity of the enzyme.

Which curve shows the effect of increasing the temperature by 10°C and adding extra substrate?



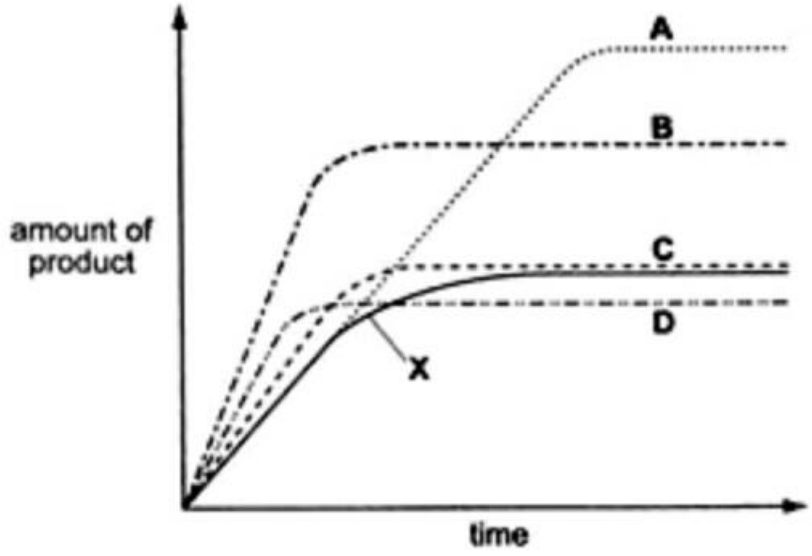
A A

B B

C C

39 : 26

Which curve shows the effect of increasing the temperature by 10°C and adding extra substrate?



A A

B B

C C

D D

39 : 23

Q 14/50 40 min Hint

Q : What is the effect of increasing substrate concentration on the degree of inhibition of an enzyme-controlled reaction?

A Competitive inhibition decreases and non-competitive inhibition increases

B Competitive inhibition decreases while no change on non-competitive inhibition

C Competitive inhibition increases while non-competitive inhibition decreases

D Competitive inhibition does not change while non-competitive increases

9 10 11 12 13 14 1

39 : 21

Q 15/50 40 min Hint

Q : Which levels of protein structure are demonstrated by a haemoglobin molecule?

A Primary only

B Primary and secondary

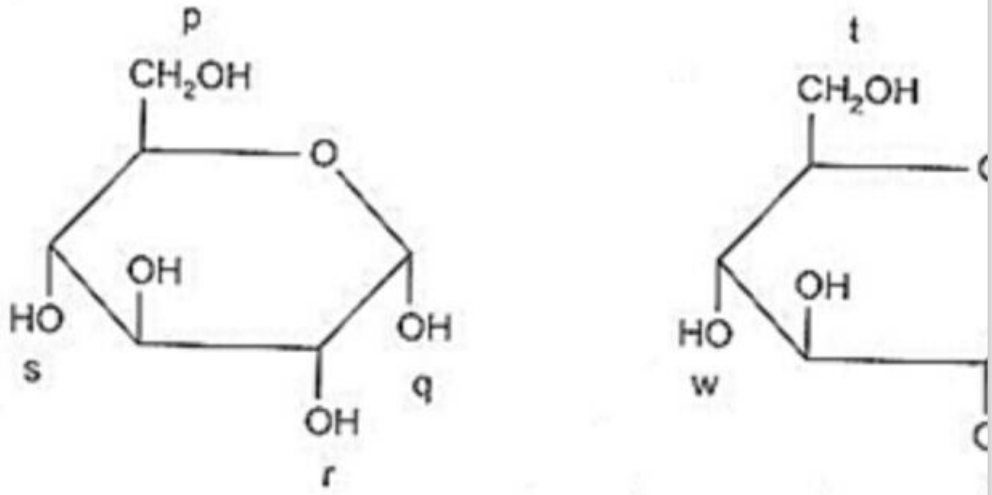
C Primary and tertiary

D Primary, secondary, tertiary and quaternary

9 10 11 12 13 14 15

39 : 08

Q :
The diagram shows two molecules of glucose. Four possible bonding positions are labelled p, q, r, s and t, u, v, w.



When these two molecules condense to form glycogen, where could bonds form?

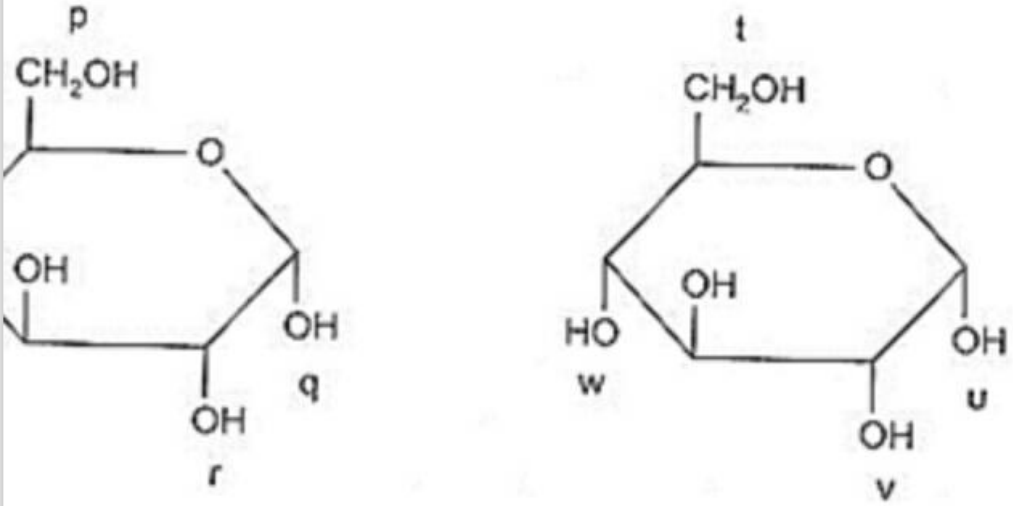
A p-u or p-v

B p-u or q-w

C p-v or q-w

39 : 06

iagram shows two molecules of
se. Four possible bonding
ons are labelled p, q, r, s and t, u,



n these two molecules condense to
glycogen, where could bonds
?

A p-u or p-v

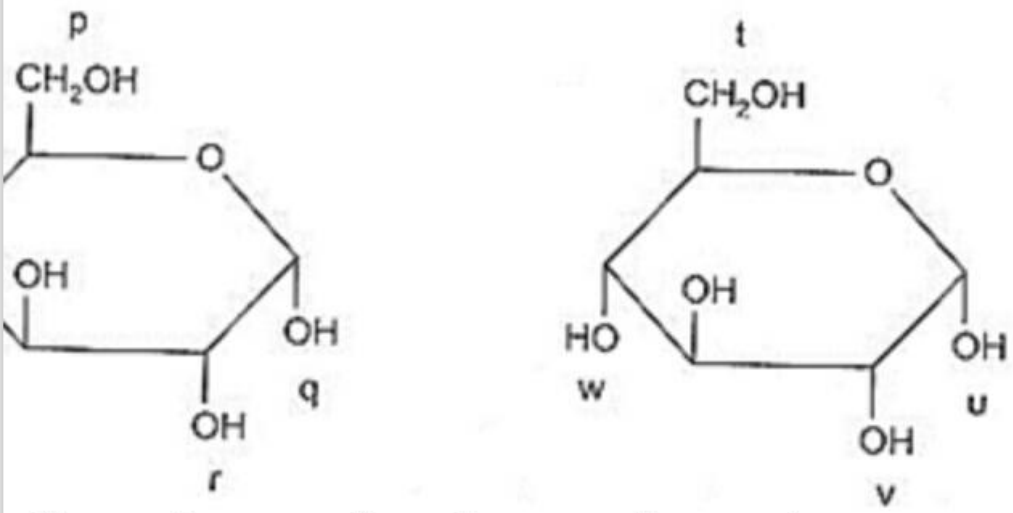
B p-u or q-w

C p-v or q-w

1 12 13 14 15 16 17

39 : 05

ons are labelled p, q, r, s and t, u,



n these two molecules condense to glycogen, where could bonds ?

A p-u or p-v

B p-u or q-w

C p-v or q-w

D p-w or v-w

39 : 03

Q 17/50 40 min Hint

Q : Which property of water minimizes temperature changes in cells and organisms?

A Cohesion

B Heat of vaporization

C Maximum density at 4°C

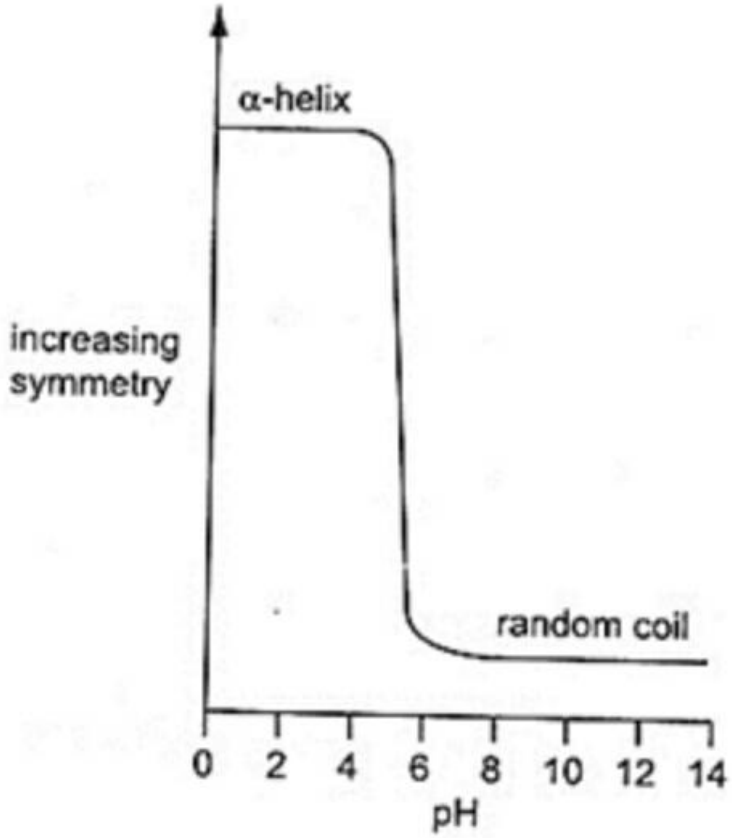
D Specific heat capacity

1 12 13 14 15 16 17

38 : 57

Q :

The graph shows the effect of pH on the structure of a protein which consists entirely of repeating residues of one amino acid.



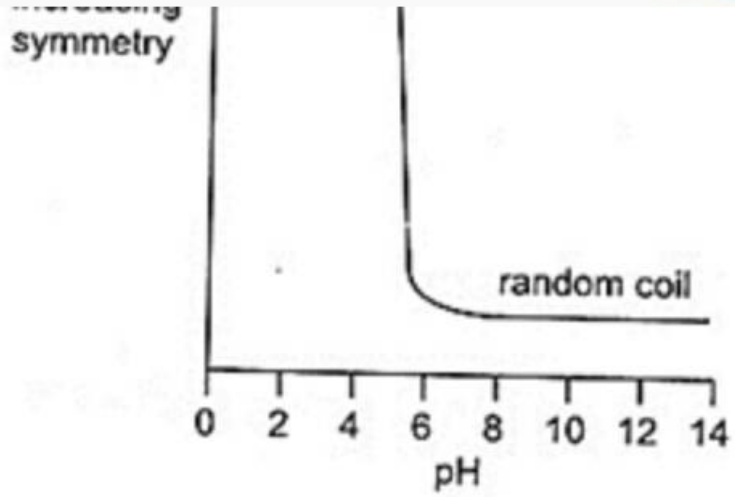
Which statement is true?

A At pH2 the protein has lost its secondary structure.

At pH2 the protein has lost its

13 14 15 16 17 18 19

38 : 55



Which statement is true?

A At pH2 the protein has lost its secondary structure.

B At pH2 the protein has lost its tertiary structure.

C At pH 10 the protein has lost its primary structure.

D At pH 8 the protein has lost its secondary structure.

13 14 15 16 17 18 19

38 : 54

Q 19/50 40 min Hint

Q : Which types of bonds hold the tertiary structure of a protein molecule?

A Disulphide, glycosidic, hydrogen, ionic, peptide

B Disulphide, hydrogen, ionic, peptide

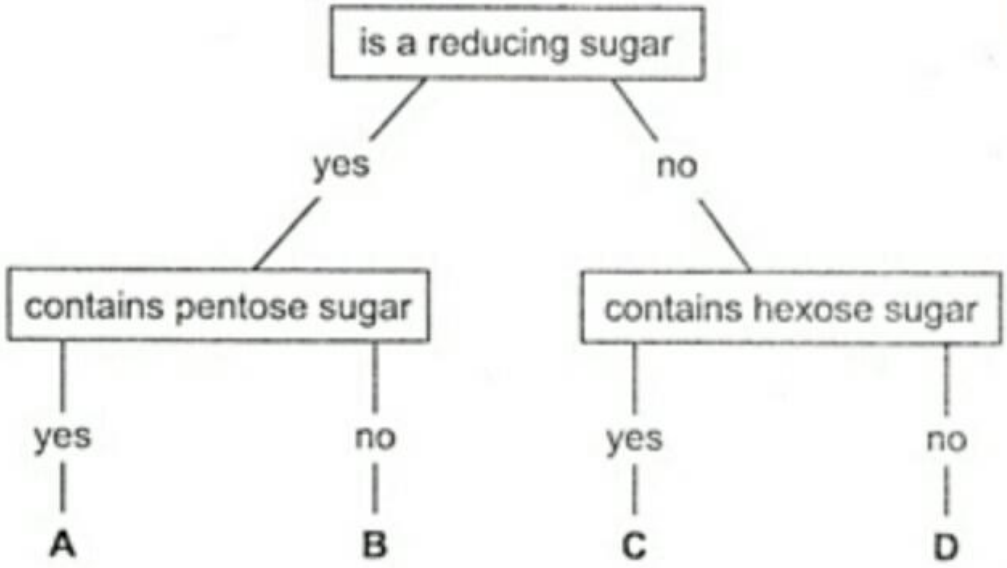
C Disulphide, hydrogen, ionic

D Disulphide, peptide, hydrogen, ester

13 14 15 16 17 18 19

38 : 47

Q :
Which molecule in the sketch is sucrose?



A A

B B

C C

D D

15 16 17 18 19 20 21

38 : 45

Q 21/50 40 min Hint

Q : Which statement is true of all enzymes?

A They are denatured at temperatures above 60 °C.

B They are inactivated at low pH values.

C They catalyze the breakdown of large molecules into smaller ones.

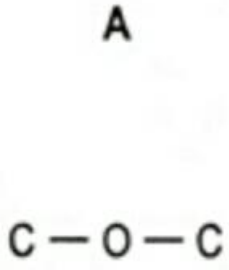
D They reduce the amount of energy required to start a reaction.

5 16 17 18 19 20 21

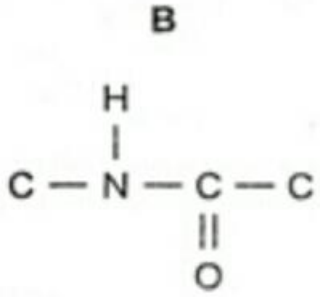
38 : 40

Q :
Which diagram shows the bond linking the individual units of a nucleic acid?

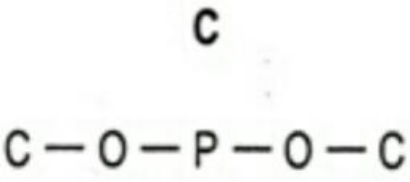
A



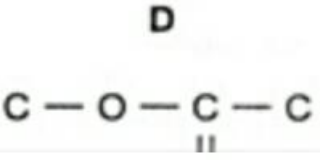
B



C



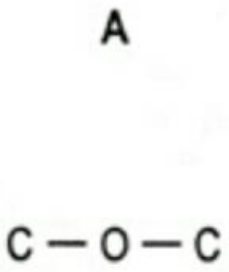
D



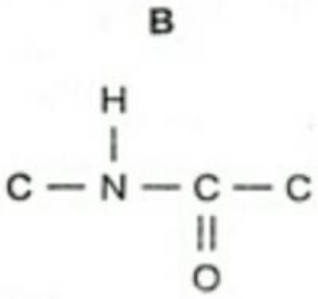
38 : 38

the individual units of a nucleic acid?

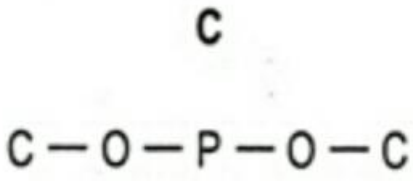
A



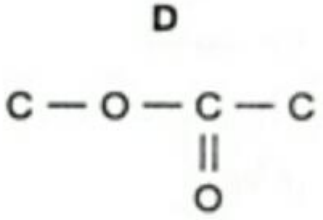
B



C



D



38 : 37

Q 23/50 40 min Hint

Q : Which type of reaction takes place when starch molecules are converted into reducing sugars?

A Condesation

B Hydrolysis

C Polymerisation

D Synthesis

18 19 20 21 22 23

38 : 33

Q 24/50 40 min Hint

Q : At which levels of protein structure do hydrophobic interactions occur?

A Primary, secondary and tertiary

B Primary, secondary, tertiary and quaternary

C Tertiary and quaternary

D Quaternary only

18 19 20 21 22 23 24

38 : 30

Q 25/50 40 min Hint

Q : Which properties are characteristic of a non-competitive inhibitor of an enzyme?

A Binds at active site and effect reduces by adding more substrate

B Binds at active site and effect does not reduce by adding more substrate

C Does not bind at active site and effect reduces by adding more substrate

D Does not bind at active site and effect does not reduce by adding more substrate

0 21 22 23 24 25 26

38 : 29

Q 26/50 40 min Hint

Q : Which statement is true for cellulose, but not true for protein?

A It is found in cell surface membranes.

B It is synthesised from identical sub-units.

C It is used as an energy source.

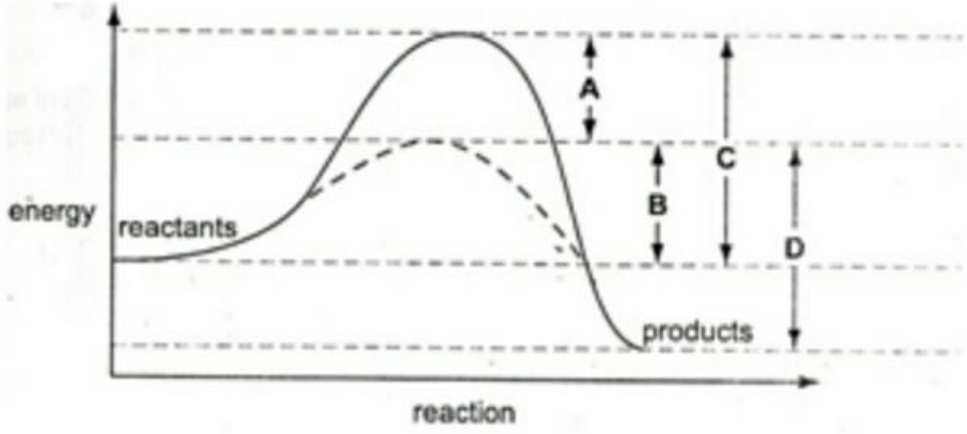
D It may be a structural component.

20 21 22 23 24 25 26

38 : 24

Q :

The graph shows the activation energy of an enzyme-catalysed reaction and the same reaction without a catalyst. Which arrow shows the activation energy of the uncatalysed reaction?



A A

B B

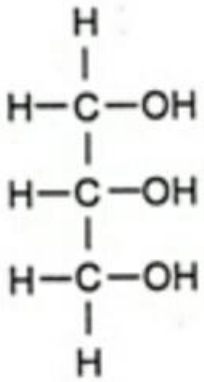
C C

D D

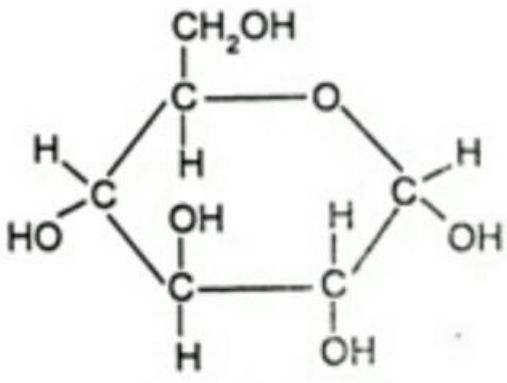
38 : 19

Q : Which molecule is found in glycogen?

A



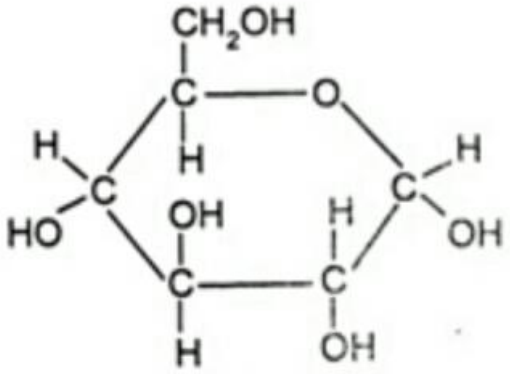
B



C

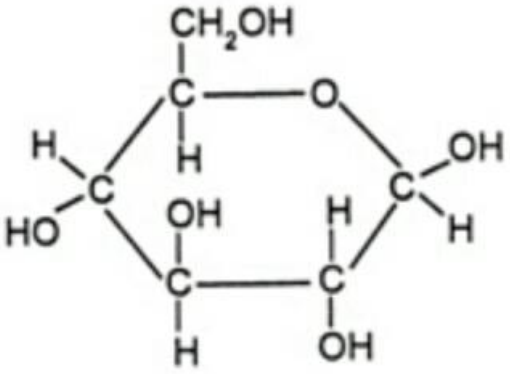
38 : 17

B



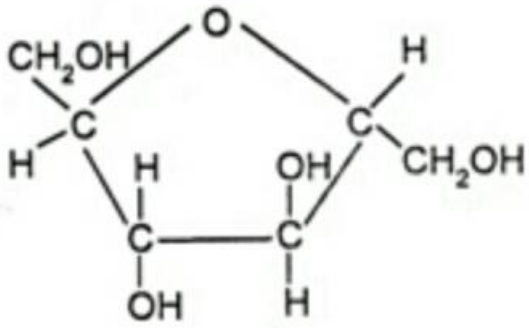
C

C



D

D



38 : 15

Q 29/50 40 min Hint

Q : Which type of sugar and bonds are found in a DNA molecule?

A Sugar – Hexose, Bond – Hydrogen

B Sugar – Hexose, Bond – Peptide

C Sugar – Pentose, Bond – Hydrogen

D Sugar – Pentose, Bond - Peptide

23 24 25 26 27 28 29

38 : 13

Q 30/50 40 min Hint

Q : A length of double-stranded DNA contains 120 nucleotides and codes for polypeptide X. What is the maximum length of polypeptide X?

A 20 amino acids

B 40 amino acids

C 60 amino acids

D 120 amino acids

26 27 28 29 30 31

38 : 12

Q 31/50 40 min Hint

Q : Which of the following is a polysaccharide present in human muscle?

A Amylose

B Collagen

C Glycogen

D Haemoglobin

26 27 28 29 30 31

38 : 09

Q 32/50 40 min Hint

Q : Which statement about triglycerides is correct?

A There are made up of three fatty acids combined with glycogen

B They are more saturated with hydrogen compared with phospholipids

C They form bilayer in the membranes of cells

D They have a lower ratio of oxygen to carbon compared with carbohydrates

28 29 30 31 32 33 3

38 : 07

Q 33/50 40 min Hint

Q : When a peptide bond is formed, which statement is correct?

A One amino acid loses a hydroxyl group from its amine group.

B One amino acid loses a hydroxyl group form its carboxyl group

C Both amino acids lose a hydrogen atom form their amine group

D Both amino acids lose a hydrogen atom form their carboxyl group

28 29 30 31 32 33 3

38 : 04

Q 34/50 40 min Hint

Q : How many fatty acids residues are normally present in a phospholipid molecule?

A 1

B 2

C 3

D 4

28 29 30 31 32 33 34

38 : 02

Q 35/50 40 min Hint

Q :
Myoglobin is a protein with a similar function to haemoglobin. However, myoglobin does not have a quaternary structure.
Why does myoglobin not have quaternary structure?

A Myoglobin does not contain a haem group.

B Myoglobin does not contain any alpha helices.

C Myoglobin has a fibrous rather than a globular structure.

D Myoglobin has only one polypeptide chain.

30 31 32 33 34 35 36

37 : 57

Q :
Two disaccharides are maltose and sucrose. Maltose is formed from two molecules of glucose. While sucrose is formed form fructose and glucose. Which row shows the molecular formulae of these two disaccharides?

A Maltose – $C_{12}H_{22}O_{11}$, Sucrose – $C_{12}H_{22}O_{11}$

B Maltose – $C_{12}H_{22}O_{11}$, Sucrose – $C_{12}H_{24}O_{12}$

C Maltose – $C_{12}H_{24}O_{12}$, Sucrose – $C_{12}H_{22}O_{11}$

D Maltose – $C_{12}H_{22}O_{11}$, Sucrose – $C_{12}H_{24}O_{11}$

37 : 55

Q 37/50 40 min Hint

Q : Which molecule has its synthesis directly controlled by DNA?

A Amylase

B Cholesterol

C Glycogen

D Phospholipid

32 33 34 35 36 37

37 : 53

Q 38/50 40 min Hint

Q : Which of the following pairs is not correctly matched?

A Triose sugar → Glyceraldehyde → Aldo sugar

B Pentose sugar → Ribulose → Keto sugar

C Hexose sugar → Fructose → Aldo sugar

D Triose sugar → Dihydroxy acetone → Keto sugar

33 34 35 36 37 38 39

37 : 51

Q 39/50 40 min Hint

Q : Lipids are relatively insoluble in:

A Chloroform

B Benzene

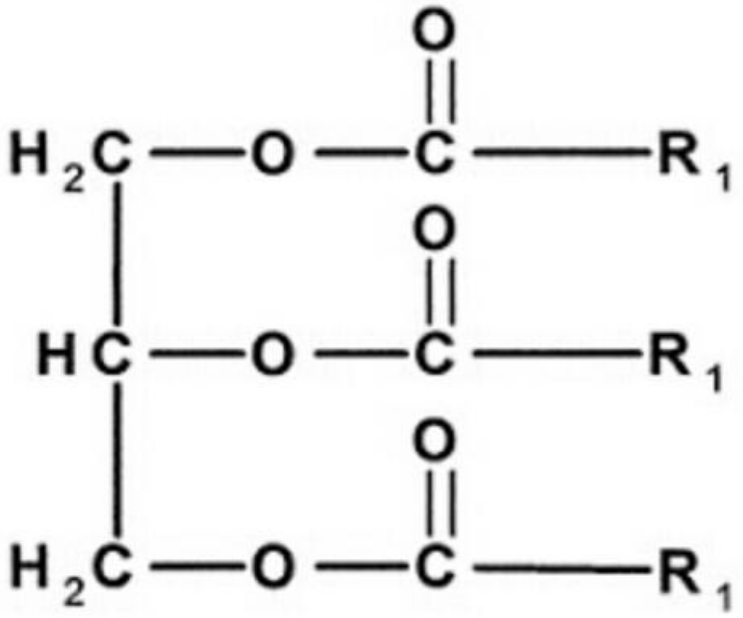
C Water

D Ether

33 34 35 36 37 38 39

37 : 47

Q :
Considering the following molecule, what is its correct composition?



A 3 glycerol + 1 fatty acid

B 1 glycerol + 3 fatty acids

C 3 glycerol + 3 fatty acids

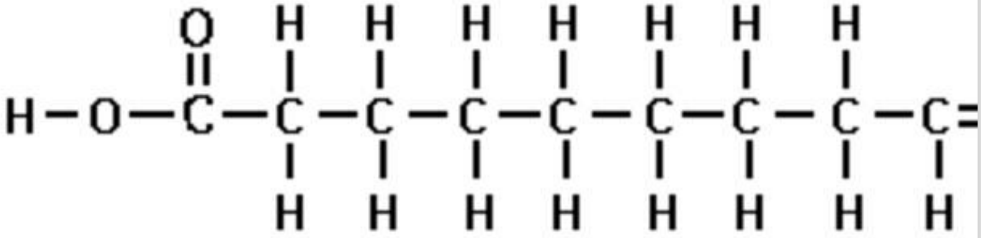
D 1 glycerol + 1 fatty acid

35 36 37 38 39 40 4

37 : 40

Q 41/50 40 min Hint

Q :
Specify the name of fatty acid in the given figure.



A Butyric acid

B Palmitic acid

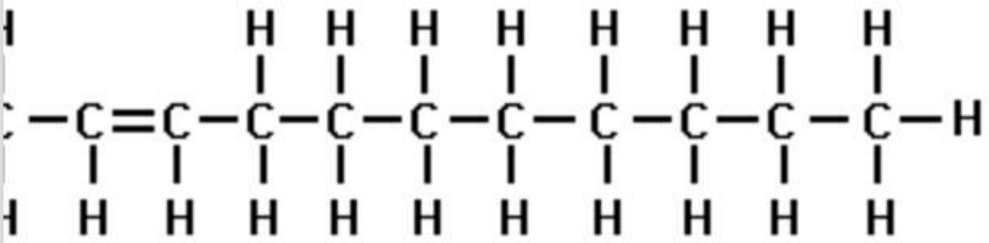
C Stearic acid

D Oleic acid

35 36 37 38 39 40 41

37 : 37

Q 41/50 40 min Hint



A Butyric acid

B Palmitic acid

C Stearic acid

D Oleic acid

35 36 37 38 39 40 41

37 : 34

Q 42/50 40 min Hint

Q : Chitin is:

A Simple polysaccharide

B Nitrogenous polysaccharide

C Lipoprotein

D Protein

37 38 39 40 41 42 43

37 : 33

Q 43/50 40 min Hint

Q : mRNA is the polymer of:

A Ribonucleotide

B Ribonucleoside

C Deoxyribonucleotide

D Ribosome

37 38 39 40 41 42 43

37 : 30

Q 44/50 40 min Hint

Q : Which component of DNA varies in different DNA molecules?

A Pentose sugar

B Nitrogen base

C Phosphate

D All A, B, C

39 40 41 42 43 44

37 : 28

Q 45/50 40 min Hint

Q : What is ATP?

A Pentose sugar + adenine + 3 molecules of phosphate

B Hexose sugar + adenine + 3 molecules of phosphate

C Amino acid + adenine + 3 molecules of phosphate

D 3 nucleotides + adenine + 1 molecule of phosphate

40 41 42 43 44 45 46

37 : 26

Q 46/50 40 min Hint

Q : What is an apoenzyme?

A Protein

B Amino acid

C Metallic ions

D Carbohydrates

40 41 42 43 44 45 46

37 : 24

Q 47/50 40 min Hint

Q : What is co-enzyme?

A Always protein

B Always vitamin

C Often protein

D Often vitamin

42 43 44 45 46 47 48

37 : 23

Q 48/50 40 min Hint

Q : Which of the following is not a co-factor?

A NAD

B NADP

C ADP

D FAD

42 43 44 45 46 47 48

37 : 20

Q 49/50 40 min Hint

Q : DNA nucleotides of one strand are attached with each other though:

A Hydrogen bonds

B Ionic bonds

C Covalent bonds

D Electrovalent bonds

44 45 46 47 48 49 50

37 : 18

Q 50/50 40 min Hint

Q : Most abundant organic compound on earth is:

A Protein

B Cellulose

C Lipid

D Steroid

44 45 46 47 48 49 50

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Self Assessment Test (Unit-2)

Correct

Unattempted

Incorrect

Q 1/50

Q : These are most abundant organic compounds to be found in cells:

A Carbohydrates

B Proteins

C Lipids

D Water

1 2 3 4 5 6 7

Self Assessment Test (Unit-2)

Correct

Unattempted

Incorrect

Q 2/50

Q : What does a hemoglobin molecule contain?

A Four Fe^{2+}attached to each haem group

B Four oxygen molecules attached to each haem group

C Four polypeptide chains each with four attached haem groups

D Four polypeptide chains each with one attached haem group

1 2 3 4 5 6 7

Self Assessment Test (Unit-2)

Correct

Unattempted

Incorrect

Q 3/50

Q : All of the following elements are present in all carbohydrates except:

A Carbon

B Oxygen

C Hydrogen

D Nitrogen

1 2 3 4 5 6 7

Self Assessment Test (Unit-2)

Correct

Unattempted

Incorrect

Q 4/50

Q : Which term most appropriately describes catalase, collagen and haemoglobin?

A Enzymes

B Fibrous proteins

C Globular proteins

D Polypeptides

1 2 3 4 5 6 7

Self Assessment Test (Unit-2)

Correct

Unattempted

Incorrect

Q 5/50

Q : Which property of proteins enables them to act as pH buffers?

A They are soluble

B They contain carboxyl and amino groups

C They have a high molecular mass

D They possess both secondary and tertiary structure

1 2 3 4 5 6 7

Self Assessment Test (Unit-2)

Correct

Unattempted

Incorrect

Q 6/50

Q : _____ has unbranched chains of glucose and is soluble in hot water.

A Amylose

B Amylopectin

C Glycogen

D Cellulose

1 2 3 4 5 6 7

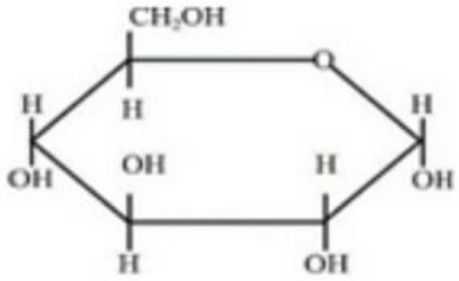
Correct

Unattempted

Incorrect

Q 7/50

Q :
The diagram shows a ring structure of glucose. Which form of glucose is shown and in which molecule is it present?



A Form of glucose wh
α Cel

B Form of glucose wh
α Sta

1 2 3 4 5 6 7

Self Assessment Test (Unit-2)

Correct

Unattempted

Incorrect

Q 8/50

Q : Silk protein is present in:

A Nail

B Plant cell wall

C Hair

D Spider's web

4 5 6 7 8 9

Self Assessment Test (Unit-2)

Correct

Unattempted

Incorrect

Q 9/50

Q : All of the following are true about lipids except:

A They store high amount of energy

B They play important role in insulation

C They are polymers of fatty acids

D They are mostly hydrophobic in nature

4 5 6 7 8 9

Self Assessment Test (Unit-2)

Correct

Unattempted

Incorrect

Q 10/50

Q : Property of water important for thermo-stabilization:

A Highly reactive

B Non polar

C Specific heat capacity

D Solubility

6 7 8 9 10 11

Self Assessment Test (Unit-2)

Correct

Unattempted

Incorrect

Q 11/50

Q : Evaporation of 2ml of water, lowers the temperature of remaining 998 ml by:

A $2\ C^0$

B $1\ C^0$

C $5C^0$

D $10\ C^0$

6 7 8 9 10 11

Self Assessment Test (Unit-2)

Correct

Unattempted

Incorrect

Q 12/50

Q : Lipids which are abundant in membranes:

A Acylglycerols

B Terpenoids

C Waxes

D Phospholipids

8 9 10 11 12 13

Self Assessment Test (Unit-2)

Correct

Unattempted

Incorrect

Q 13/50

Q : All are true about ATP except:

A Energy currency of cell

B Contains three high energy bonds

C Contains ribose sugar

D Contains three phosphate groups

8 9 10 11 12 13

Self Assessment Test (Unit-2)

Correct

Unattempted

Incorrect

Q 14/50

Q : A DNA fragment contains ACGT nucleotide sequence in one strand. How many hydrogen bonds will it make with other strand?

A 8

B 10

C 12

D 6

10 11 12 13 14 15

Self Assessment Test (Unit-2)

Correct

Unattempted

Incorrect

Q 15/50

Q : Adenine and guanine are:

A Main nitrogenous bases of nucleic acids

B Main nitrogenous bases of phospholipids

C Main nitrogenous wastes of humans

D Main types of amino acids in proteins

10 11 12 13 14 15

Self Assessment Test (Unit-2)

Correct

Unattempted

Incorrect

Q 16/50

Q : Secondary structure of DNA duplex is maintained by:

A Phosphodiester linkage

B Ionic bond

C Hydrogen bond

D Hyperphobic interaction

1 12 13 14 15 16 17

Self Assessment Test (Unit-2)

Correct

Unattempted

Incorrect

Q 17/50

Q : 3/ end of nucleic acids have always a free _____group.

A Phosphate

B Hydroxyl

C Carboxylic

D Amino

11 12 13 14 15 16 17

Self Assessment Test (Unit-2)

Correct

Unattempted

Incorrect

Q 18/50

Q : This is not true about DNA molecule

A Double polymer

B Secondary structure

C One groove in each turn

D Constant diameter

13 14 15 16 17 18 19

Self Assessment Test (Unit-2)

Correct

Unattempted

Incorrect

Q 19/50

Q : Form of polysaccharide stored in bacteria and animals:

A Starch

B Glycogen

C Cellulose

D Chitin

13 14 15 16 17 18 19

Self Assessment Test (Unit-2)

Correct

Unattempted

Incorrect

Q 20/50

Q : A structural protein is:

A Pepsin

B Haemoglobin

C Collagen

D Immunoglobulin

16 17 18 19 20 21

Self Assessment Test (Unit-2)

Correct

Unattempted

Incorrect

Q 21/50

Q : Which of the following are single ringed structures?

A Cytosine, thymine and Adenine

B Adenine, Guanine and Cytosine

C Cytosine, Guanine and thymine

D Cytosine, Thymine and Uracil

16 17 18 19 20 21

Self Assessment Test (Unit-2)

Correct

Unattempted

Incorrect

Q 22/50

Q : A famous sugar found in genetic material is:

A Hexose sugar

B Pentose sugar

C Tetrose sugar

D Triose sugar

18 19 20 21 22 23 24

Self Assessment Test (Unit-2)

Correct

Unattempted

Incorrect

Q 23/50

Q : Nitrogen bases of nucleotides in RNA are attached to:

A Sugar molecules

B Phosphate radicals

C Nucleoside

D Deoxyribose

18 19 20 21 22 23 24

Self Assessment Test (Unit-2)

Correct

Unattempted

Incorrect

Q 24/50

Q : Cross links of double helix of DNA are formed of:

A Sugar molecules

B Phosphate radicals

C Complementary nitrogen bases

D Similar nitrogen bases

18 19 20 21 22 23 24

Self Assessment Test (Unit-2)

Correct

Unattempted

Incorrect

Q 25/50

Q : Regulatory sites other than active site, present over the enzymes are called:

A Active sites

B Catalytic groups

C Binding site

D Allosteric sites

21 22 23 24 25 26

Self Assessment Test (Unit-2)

Correct

Unattempted

Incorrect

Q 26/50

Q : Which one is found only in RNA?

A Cytosine

B Adenine

C Uracil

D Guanine

21 22 23 24 25 26

Self Assessment Test (Unit-2)

Correct

Unattempted

Incorrect

Q 27/50

Q : A monosaccharide is:

A Lactose

B Sucrose

C Ribose

D Maltose

23 24 25 26 27 28

Self Assessment Test (Unit-2)

Correct

Unattempted

Incorrect

Q 28/50

Q : The most common carbohydrate monomer is:

A Maltose

B Lactose

C Glucose

D Galactose

23 24 25 26 27 28

Self Assessment Test (Unit-2)

Correct

Unattempted

Incorrect

Q 29/50

Q : Which forms nails, hair and feathers?

A Fibrin

B Keratin

C Collagen

D Elastin

25 26 27 28 29 30 31

Self Assessment Test (Unit-2)

Correct

Unattempted

Incorrect

Q 30/50

Q : DNA is directly involved in the synthesis of all except:

A DNA

B Protein

C tRNA

D mRNA

25 26 27 28 29 30 31

Self Assessment Test (Unit-2)

Correct

Unattempted

Incorrect

Q 31/50

Q : Immediate source of energy is:

A Sucrose

B Glucose

C Fat

D Starch

25 26 27 28 29 30 31

Self Assessment Test (Unit-2)

Correct

Unattempted

Incorrect

Q 32/50

Q : Which one is correct base pairing for DNA molecule?

A Cytosine - Uracil

B Thymine - Guanine

C Adenine - Thymine

D Thymine – Uracil

7 28 29 30 31 32 33

Self Assessment Test (Unit-2)

Correct

Unattempted

Incorrect

Q 33/50

Q : In one strand of DNA, the base sequence is CATGACTAG. What is the base sequence on the other strand?

A CATTAGGAC

B GATGTCACT

C GAUCUGAUC

D GTACTGATC

7 28 29 30 31 32 33

Self Assessment Test (Unit-2)

Correct

Unattempted

Incorrect

Q 34/50

Q : Number of oxygen atoms in lipid molecules is always _____ as compared to number of carbon atoms.

A Less

B More

C Equal

D Double

30 31 32 33 34 35 36

Self Assessment Test (Unit-2)

Correct

Unattempted

Incorrect

Q 35/50

Q : Two amino acid monomers are joined by:

A Hydrogen bond

B Peptide bond

C Phosphodiester bond

D Ester bond

30 31 32 33 34 35 36

Self Assessment Test (Unit-2)

Correct

Unattempted

Incorrect

Q 36/50

Q : Unsaturated fats are made saturated by:

A Polymerization

B Hydrogenation

C Dehydrogenation

D Hybridization

30 31 32 33 34 35 36

Self Assessment Test (Unit-2)

Correct

Unattempted

Incorrect

Q 37/50

Q : A peptide chain attains secondary structure through the formation of:

A Peptide bond

B Ionic bond

C Hydrogen bond

D Disulphide bond

32 33 34 35 36 37 38

Self Assessment Test (Unit-2)

Correct

Unattempted

Incorrect

Q 38/50

Q : Specificity of an enzyme is determined by:

A Number and sequence of amino acids

B Charge on substrate

C pH of environment

D Charge and shape of active site

32 33 34 35 36 37 38

Self Assessment Test (Unit-2)

Correct

Unattempted

Incorrect

Q 39/50

Q : An activated enzyme consisting of polypeptide chain and a cofactor is called:

A Apoenzyme

B Coenzyme

C Holoenzyme

D Proenzyme

34 35 36 37 38 39 40

Correct

Unattempted

Incorrect

Q 40/50

Q : Activators are usually derived from:

A Vitamins

B Proteins

C Carbohydrates

D Metal ions

Self Assessment Test (Unit-2)

Correct

Unattempted

Incorrect

Q 41/50

Q : At a certain point where conversion of substrate/s into product/s is maximum, the enzyme/s would be:

A Free

B Activated

C Denatured

D Saturated

37 38 39 40 41 42

Self Assessment Test (Unit-2)

Correct

Unattempted

Incorrect

Q 42/50

Q : A three dimensional cavity bearing a specific charge by which the enzyme reacts with its substrate is called:

A Active site

B Catalytic site

C Binding site

D Allosteric site

37 38 39 40 41 42

Self Assessment Test (Unit-2)

Correct

Unattempted

Incorrect

Q 43/50

Q : Which step causes activation of catalytic site of an enzyme?

A Change in pH of enzyme

B Change in the shape of substrate

C Formation of ES complex

D Change in temperature

38 39 40 41 42 43 44

Self Assessment Test (Unit-2)

Correct

Unattempted

Incorrect

Q 44/50

Q : In a naturally occurring chemical reaction, all active sites are occupied, the rate of reaction would be:

A Minimum and constant

B Maximum and accelerating

C Zero and constant

D Constant and maximum

38 39 40 41 42 43 44

Self Assessment Test (Unit-2)

Correct

Unattempted

Incorrect

Q 45/50

Q : All of the following pairs contain keratin except:

A Hooves& Horns

B Hair & Nails

C Skin & Feathers

D Muscles & Bones

41 42 43 44 45 46

Self Assessment Test (Unit-2)

Correct

Unattempted

Incorrect

Q 46/50

Q : Excessive increase in temperature of medium causes the enzyme molecule to be:

A Activated

B Denatured

C Unaffected

D Inactivated

41 42 43 44 45 46

Self Assessment Test (Unit-2)

Correct

Unattempted

Incorrect

Q 47/50

Q : Inhibitors are chemically:

A Metals

B Inorganic

C Organic

D All A, B, C

42 43 44 45 46 47 48

Self Assessment Test (Unit-2)

Correct

Unattempted

Incorrect

Q 48/50

Q : Optimum temperature of enzymes present in human body is:

A 27°C

B 47°C

C 37°C

D 30°C

2 43 44 45 46 47 48

Self Assessment Test (Unit-2)

Correct

Unattempted

Incorrect

Q 49/50

Q : Inhibitors which block the enzyme by forming weak bond are called:

A Competitive inhibitors

B Irreversible inhibitors

C Non- competitive inhibitors

D Reversible inhibitors

44 45 46 47 48 49 50

Self Assessment Test (Unit-2)

Correct

Unattempted

Incorrect

Q 50/50

Q : Malonic acid is an example of:

A Irreversible inhibitor

B Competitive inhibitor

C Reversible inhibitor

D Non-competitive inhibitor

44 45 46 47 48 49 50

TEST

Test Level-3 (Unit-2)

50 Questions

40 min

Topics

TL-3 Unit (Biological Molecules)

Start Test

Test Level-3 (Unit-2)

Correct

Unattempted

Incorrect

Q 1/50

Q :
What is the theoretical number of chemically different dipeptides that may be assembled from 12 different types of amino acids?

A 24

B 72

C 144

D 400

1 2 3 4 5 6 7

Test Level-3 (Unit-2)

Correct

Unattempted

Incorrect

Q 2/50

Q : Which polysaccharides are branched and which are unbranched?

A Branched (Amylose), Unbranched (Glycogen)

B Branched (Amylopectin), Unbranched (Cellulose)

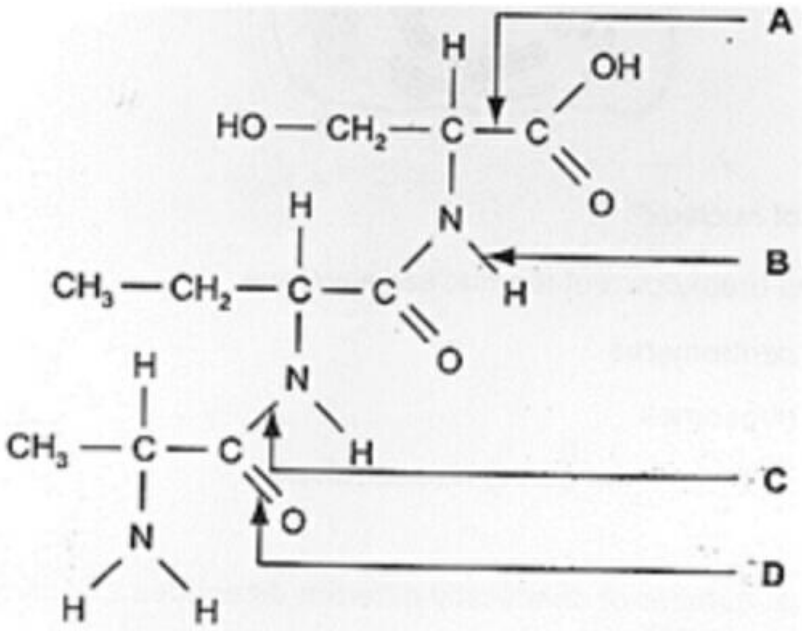
C Branched (Cellulose), Unbranched (Amylose)

D Branched (Glycogen), Unbranched (Amylopectin)

1 2 3 4 5 6 7

The diagram shows a molecule.

Which arrow labels a peptide bond?



A A

B B

C C

Test Level-3 (Unit-2)

Correct

Unattempted

Incorrect

Q 4/50

Q : How many haem groups are there in one molecule of human haemoglobin?

A 1

B 2

C 3

D 4

1 2 3 4 5 6 7

Test Level-3 (Unit-2)

Correct

Unattempted

Incorrect

Q 5/50

Q : Which substance contains carbon, hydrogen, oxygen and nitrogen?

A Collagen

B Glycogen

C Amylopectin

D Triglyceride

1 2 3 4 5 6 7

Test Level-3 (Unit-2)

Correct

Unattempted

Incorrect

Q 6/50

Q :

A metabolic pathway is

Reactant $\xrightarrow{\text{enzyme1}}$ Substance X $\xrightarrow{\text{enzyme2}}$ Substance Y $\xrightarrow{\text{enzyme3}}$ End product

What would be the effect of adding a small amount of a non-competitive inhibitor for enzyme 2?

A Enzyme 2 would be partially denatured.

B Substance X would increase in concentration.

1 2 3 4 5 6 7

Test Level-3 (Unit-2)

Correct

Unattempted

Incorrect

Q 7/50

Q : Which of the following would give negative result on Benedict test?

A Glucose

B Fructose

C Maltose

D Sucrose

1 2 3 4 5 6 7

Correct

Unattempted

Incorrect

Q 8/50

Q :

During the production of apple juice, enzymes are used to break down the components of the cell walls.

Which carbohydrate will be produced by this hydrolysis?

A Amylose

B Cellulose

C Glucose

Test Level-3 (Unit-2)

Correct

Unattempted

Incorrect

Q 9/50

Q : What are the features of glycogen?

A Contains nitrogen, Branched molecule, Structural role in cell

B Contains nitrogen, Unbranched molecule, Structural role in cell

C Does not contain nitrogen, Branched molecule, Storage form in cell

D Does not contain nitrogen, Unbranched molecule, Storage form in cell

3 4 5 6 7 8 9

Test Level-3 (Unit-2)

Correct

Unattempted

Incorrect

Q 10/50

Q : What is the name of the bond joining glycerol and a fatty acid in the formation of a monoglyceride?

A Ester

B Glycosidic

C Hydrogen

D Peptide

5 6 7 8 9 10 11

Test Level-3 (Unit-2)

Correct

Unattempted

Incorrect

Q 11/50

Q :

Certain insects are able to stand on the surface of ponds.

Which property of water allows them to do this?

A Adhesion with other molecules

B Cohesion between water molecules

C Low viscosity

D Maximum density at 4°C

5 6 7 8 9 10 11

Test Level-3 (Unit-2)

Correct

Unattempted

Incorrect

Q 12/50

Q : Which term describes the type of bonding responsible for stabilizing the secondary structure of a protein?

A Disulphide

B Hydrogen

C Hydrophobic

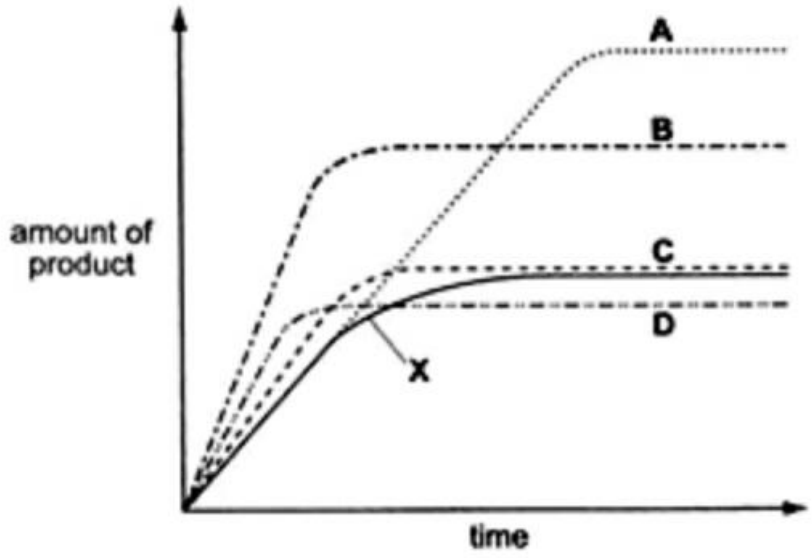
D Ionic

8 9 10 11 12 13

Q :

The curve X shows the activity of an enzyme at 20 °C. Curves A to D show the effect of different conditions on the activity of the enzyme.

Which curve shows the effect of increasing the temperature by 10°C and adding extra substrate?



A A

B B

Test Level-3 (Unit-2)

Correct

Unattempted

Incorrect

Q 14/50

Q : What is the effect of increasing substrate concentration on the degree of inhibition of an enzyme-controlled reaction?

A Competitive inhibition decreases and non-competitive inhibition increases

B Competitive inhibition decreases while no change on non-competitive inhibition

C Competitive inhibition increases while non-competitive inhibition decreases

10 11 12 13 14 15

Test Level-3 (Unit-2)

Correct

Unattempted

Incorrect

Q 15/50

Q : Which levels of protein structure are demonstrated by a haemoglobin molecule?

A Primary only

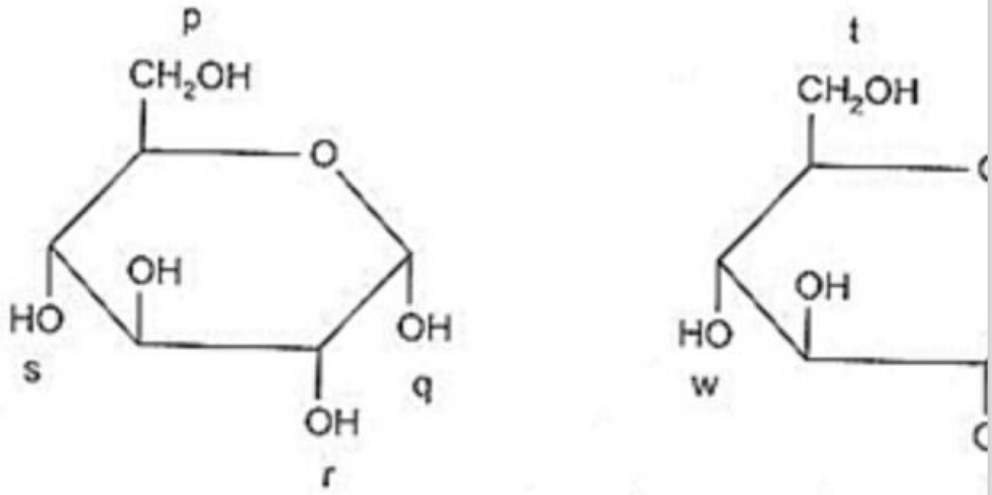
B Primary and secondary

C Primary and tertiary

D Primary, secondary, tertiary and quaternary

10 11 12 13 14 15

Q :
The diagram shows two molecules of glucose. Four possible bonding positions are labelled p, q, r, s and t, u, v, w.



When these two molecules condense to form glycogen, where could bonds form?

A p-u or p-v

B p-u or q-w

C p-v or q-w

Test Level-3 (Unit-2)

Correct

Unattempted

Incorrect

Q 17/50

Q : Which property of water minimizes temperature changes in cells and organisms?

A Cohesion

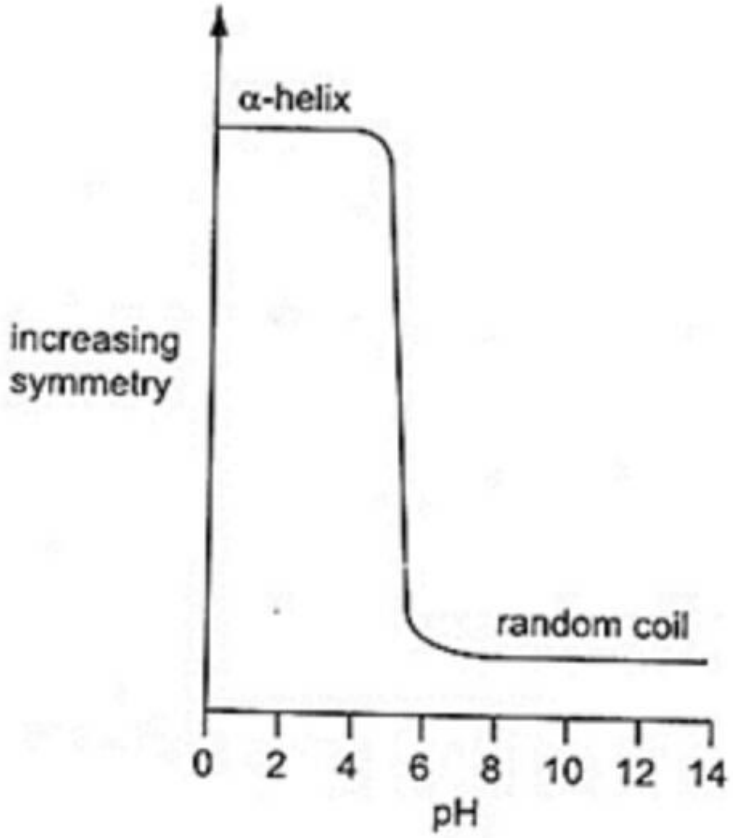
B Heat of vaporization

C Maximum density at 4°C

D Specific heat capacity

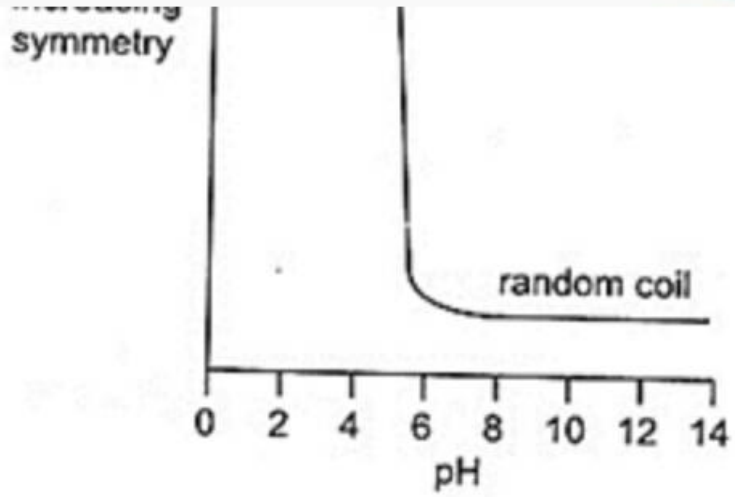
1 12 13 14 15 16 17

Q :
The graph shows the effect of pH on the structure of a protein which consists entirely of repeating residues of one amino acid.



Which statement is true?

A At pH2 the protein has lost its secondary structure.



Which statement is true?

A At pH2 the protein has lost its secondary structure.

B At pH2 the protein has lost its tertiary structure.

C At pH 10 the protein has lost its primary structure.

D At pH 8 the protein has lost its secondary structure.

Test Level-3 (Unit-2)

Correct

Unattempted

Incorrect

Q 19/50

Q : Which types of bonds hold the tertiary structure of a protein molecule?

A Disulphide, glycosidic, hydrogen, ionic, peptide

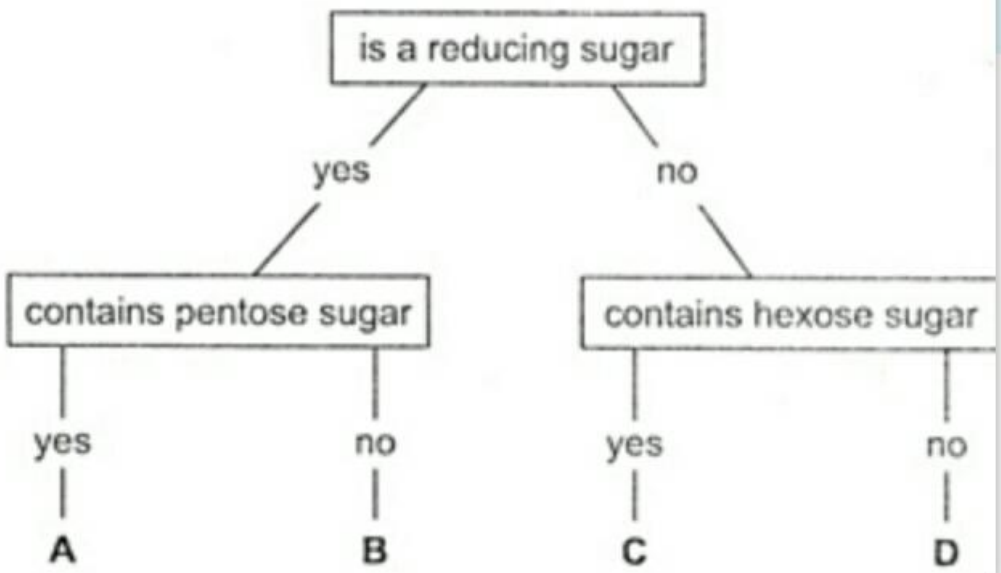
B Disulphide, hydrogen, ionic, peptide

C Disulphide, hydrogen, ionic

D Disulphide, peptide, hydrogen, ester

13 14 15 16 17 18 19

Q :
Which molecule in the sketch is sucrose?



A A

B B

C C

D D

Test Level-3 (Unit-2)

Correct

Unattempted

Incorrect

Q 21/50

Q : Which statement is true of all enzymes?

A They are denatured at temperatures above 60 °C.

B They are inactivated at low pH values.

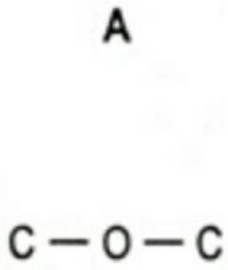
C They catalyze the breakdown of large molecules into smaller ones.

D They reduce the amount of energy required to start a reaction.

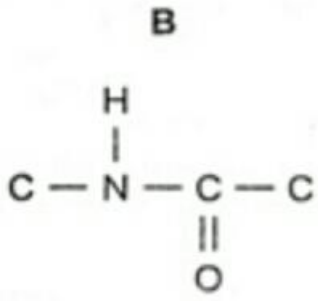
5 16 17 18 19 20 21

Q :
Which diagram shows the bond linking the individual units of a nucleic acid?

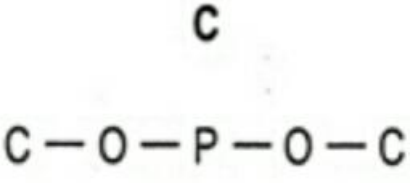
A



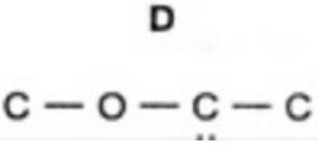
B



C



D



Test Level-3 (Unit-2)

Correct

Unattempted

Incorrect

Q 23/50

Q : Which type of reaction takes place when starch molecules are converted into reducing sugars?

A Condesation

B Hydrolysis

C Polymerisation

D Synthesis

7 18 19 20 21 22 23

Test Level-3 (Unit-2)

Correct

Unattempted

Incorrect

Q 24/50

Q : At which levels of protein structure do hydrophobic interactions occur?

A Primary, secondary and tertiary

B Primary, secondary, tertiary and quaternary

C Tertiary and quaternary

D Quaternary only

20 21 22 23 24 25

Test Level-3 (Unit-2)

Incorrect

Q 25/50

Q : Which properties are characteristic of a non-competitive inhibitor of an enzyme?

A Binds at active site and effect reduces by adding more substrate

B Binds at active site and effect does not reduce by adding more substrate

C Does not bind at active site and effect reduces by adding more substrate

D Does not bind at active site and effect does not reduce by adding more substrate

20 21 22 23 24 25

Test Level-3 (Unit-2)

Correct

Unattempted

Incorrect

Q 26/50

Q : Which statement is true for cellulose, but not true for protein?

A It is found in cell surface membranes.

B It is synthesised from identical sub-units.

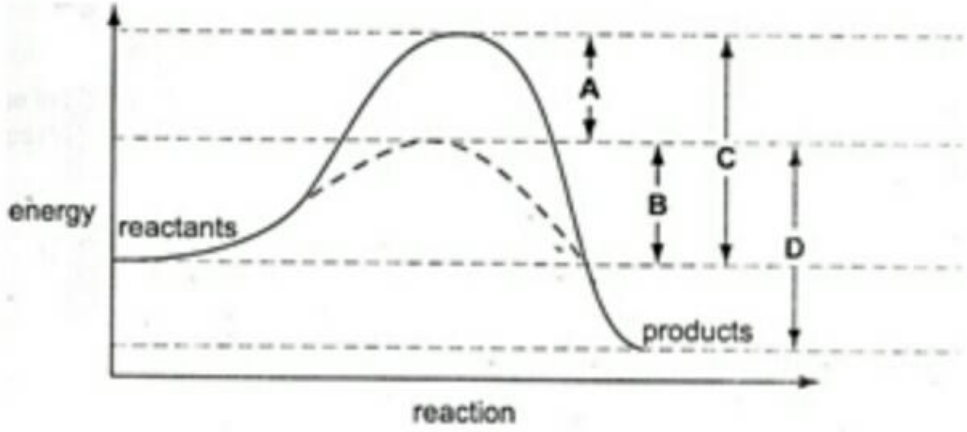
C It is used as an energy source.

D It may be a structural component.

22 23 24 25 26 27

Q :

The graph shows the activation energy of an enzyme-catalysed reaction and the same reaction without a catalyst. Which arrow shows the activation energy of the uncatalysed reaction?



A A

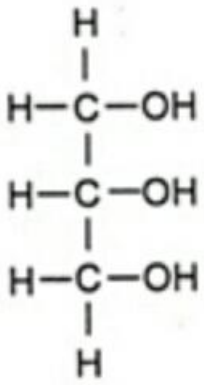
B B

C C

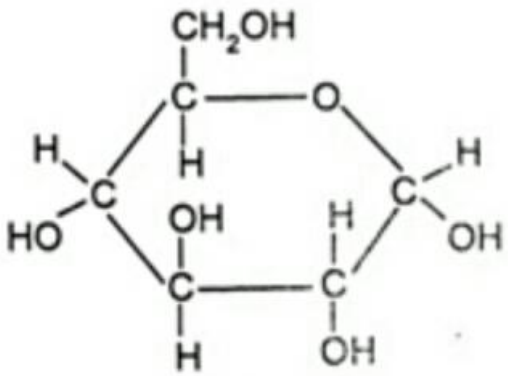
D D

Q : Which molecule is found in glycogen?

A



B



C

Test Level-3 (Unit-2)

Correct

Unattempted

Incorrect

Q 29/50

Q : Which type of sugar and bonds are found in a DNA molecule?

A Sugar – Hexose, Bond – Hydrogen

B Sugar – Hexose, Bond – Peptide

C Sugar – Pentose, Bond – Hydrogen

D Sugar – Pentose, Bond - Peptide

24 25 26 27 28 29 3

Test Level-3 (Unit-2)

Correct

Unattempted

Incorrect

Q 30/50

Q : A length of double-stranded DNA contains 120 nucleotides and codes for polypeptide X. What is the maximum length of polypeptide X?

A 20 amino acids

B 40 amino acids

C 60 amino acids

D 120 amino acids

24 25 26 27 28 29 30

Test Level-3 (Unit-2)

Correct

Unattempted

Incorrect

Q 31/50

Q : Which of the following is a polysaccharide present in human muscle?

A Amylose

B Collagen

C Glycogen

D Haemoglobin

27 28 29 30 31 32

Test Level-3 (Unit-2)

Correct

Unattempted

Incorrect

Q 32/50

Q : Which statement about triglycerides is correct?

A There are made up of three fatty acids combined with glycogen

B They are more saturated with hydrogen compared with phospholipids

C They form bilayer in the membranes of cells

D They have a lower ratio of oxygen to carbon compared with carbohydrates

27 28 29 30 31 32

Test Level-3 (Unit-2)

Correct

Unattempted

Incorrect

Q 33/50

Q : When a peptide bond is formed, which statement is correct?

A One amino acid loses a hydroxyl group from its amine group.

B One amino acid loses a hydroxyl group form its carboxyl group

C Both amino acids lose a hydrogen atom form their amine group

D Both amino acids lose a hydrogen atom form their carboxyl group

27 28 29 30 31 32 33

Test Level-3 (Unit-2)

Correct

Unattempted

Incorrect

Q 34/50

Q : How many fatty acids residues are normally present in a phospholipid molecule?

A 1

B 2

C 3

D 4

29 30 31 32 33 34

Test Level-3 (Unit-2)

Incorrect

Q 35/50

Q :
Myoglobin is a protein with a similar function to haemoglobin. However, myoglobin does not have a quaternary structure.
Why does myoglobin not have quaternary structure?

A Myoglobin does not contain a haem group.

B Myoglobin does not contain any alpha helices.

C Myoglobin has a fibrous rather than a globular structure.

D Myoglobin has only one polypeptide chain.

29 30 31 32 33 34 35

Correct

Unattempted

Incorrect

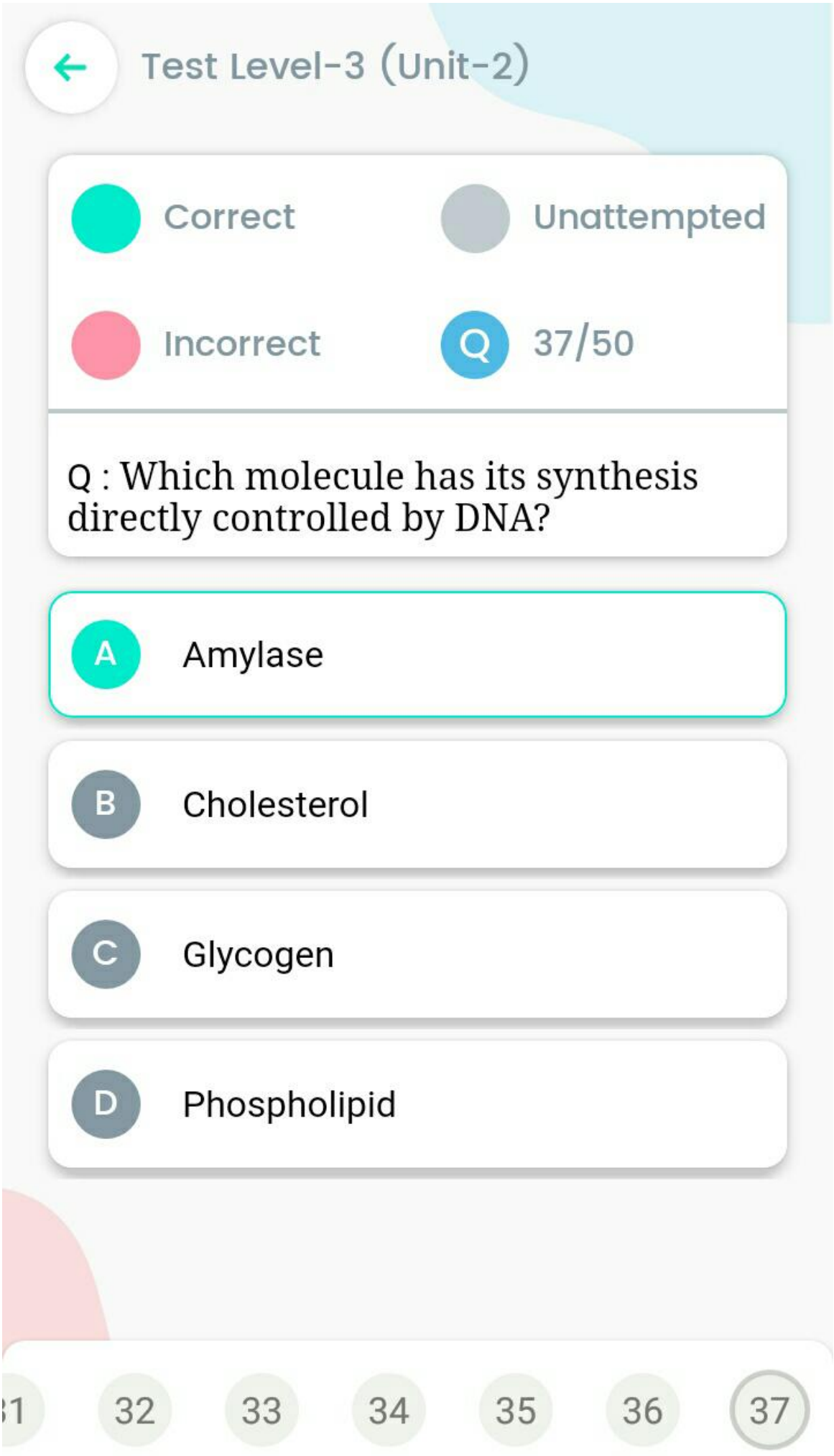
Q 36/50

Q :
Two disaccharides are maltose and sucrose. Maltose is formed from two molecules of glucose. While sucrose is formed form fructose and glucose. Which row shows the molecular formulae of these two disaccharides?

A Maltose – $C_{12}H_{22}O_{11}$, Sucrose – $C_{12}H_{22}O_{11}$

B Maltose – $C_{12}H_{22}O_{11}$, Sucrose – $C_{12}H_{24}O_{12}$

C Maltose – $C_{12}H_{24}O_{12}$, Sucrose – $C_{12}H_{22}O_{11}$



Test Level-3 (Unit-2)

Correct

Unattempted

Incorrect

Q 38/50

Q : Which of the following pairs is not correctly matched?

A Triose sugar → Glyceraldehyde → Aldo sugar

B Pentose sugar → Ribulose → Keto sugar

C Hexose sugar → Fructose → Aldo sugar

D Triose sugar → Dihydroxy acetone → Keto sugar

4 35 36 37 38 39 40

Test Level-3 (Unit-2)

Correct

Unattempted

Incorrect

Q 39/50

Q : Lipids are relatively insoluble in:

A Chloroform

B Benzene

C Water

D Ether

4 35 36 37 38 39 40

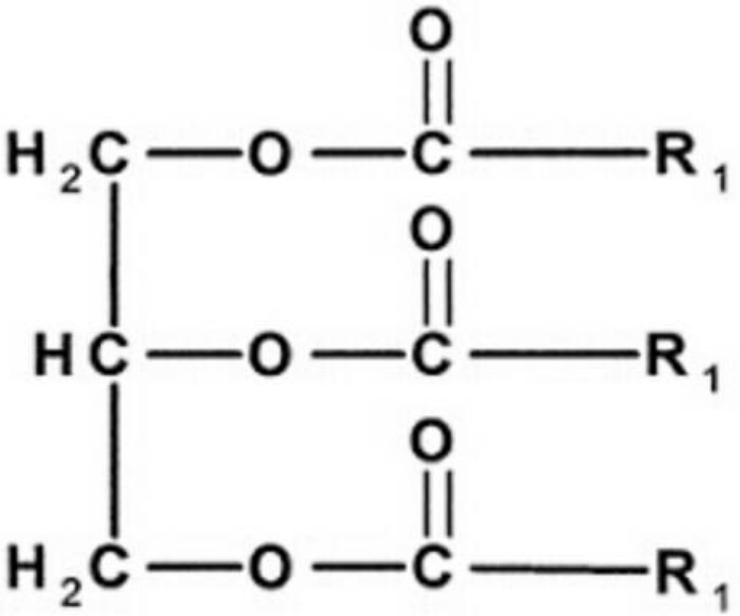
Correct

Unattempted

Incorrect

Q 40/50

Q :
Considering the following molecule, what is its correct composition?



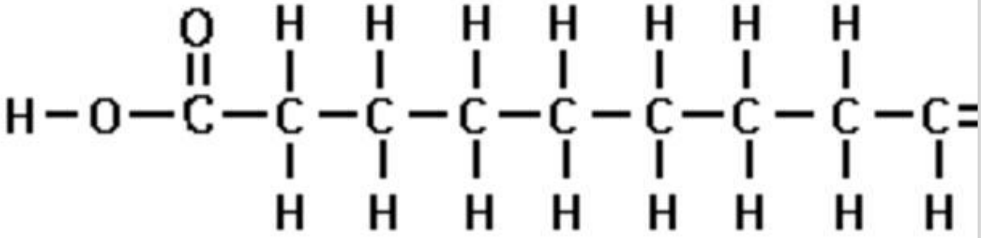
A 3 glycerol + 1 fatty acid

B 1 glycerol + 3 fatty acids

Incorrect

Q 41/50

Q :
Specify the name of fatty acid in the given figure.



A Butyric acid

B Palmitic acid

C Stearic acid

D Oleic acid

Test Level-3 (Unit-2)

Correct

Unattempted

Incorrect

Q 42/50

Q : Chitin is:

A Simple polysaccharide

B Nitrogenous polysaccharide

C Lipoprotein

D Protein

6 37 38 39 40 41 42

Test Level-3 (Unit-2)

Correct

Unattempted

Incorrect

Q 43/50

Q : mRNA is the polymer of:

A Ribonucleotide

B Ribonucleoside

C Deoxyribonucleotide

D Ribosome

38 39 40 41 42 43 44

Test Level-3 (Unit-2)

Correct

Unattempted

Incorrect

Q 44/50

Q : Which component of DNA varies in different DNA molecules?

A Pentose sugar

B Nitrogen base

C Phosphate

D All A, B, C

38 39 40 41 42 43 44

Test Level-3 (Unit-2)

Correct

Unattempted

Incorrect

Q 45/50

Q : What is ATP?

A Pentose sugar + adenine + 3 molecules of phosphate

B Hexose sugar + adenine + 3 molecules of phosphate

C Amino acid + adenine + 3 molecules of phosphate

D 3 nucleotides + adenine + 1 molecule of phosphate

0 41 42 43 44 45 46

Test Level-3 (Unit-2)

Correct

Unattempted

Incorrect

Q 46/50

Q : What is an apoenzyme?

A Protein

B Amino acid

C Metallic ions

D Carbohydrates

0 41 42 43 44 45 46

Test Level-3 (Unit-2)

Correct

Unattempted

Incorrect

Q 47/50

Q : What is co-enzyme?

A Always protein

B Always vitamin

C Often protein

D Often vitamin

43 44 45 46 47 48 49

Test Level-3 (Unit-2)

Correct

Unattempted

Incorrect

Q 48/50

Q : Which of the following is not a co-factor?

A NAD

B NADP

C ADP

D FAD

43 44 45 46 47 48 49

Test Level-3 (Unit-2)

Correct

Unattempted

Incorrect

Q 49/50

Q : DNA nucleotides of one strand are attached with each other though:

A Hydrogen bonds

B Ionic bonds

C Covalent bonds

D Electrovalent bonds

43 44 45 46 47 48 49

Test Level-3 (Unit-2)

Correct

Unattempted

Incorrect

Q 50/50

Q : Most abundant organic compound on earth is:

A Protein

B Cellulose

C Lipid

D Steroid

44 45 46 47 48 49 50