Human Biology Anatomy abd Physiology for the Health Sciences (Canadian) 2nd edition Roscoe Test Bank

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TRUE/FALSE

1 : The process of breaking of hydrogen bonds in a protein is known as denaturation.a. Trueb. False
A : true
B : false

Correct Answer : A

2 : Cytosine and thymine are single-ring bases called purines.a. Trueb. False
A : true
B : false

Correct Answer : B

3 : DNA is a double helix where by two strands of DNA bind together by the phosphate group.a. Trueb. False
A : true
B : false

Correct Answer : B

4 : Adenine always binds with thymine.a. Trueb. False
A : true
B : false

Correct Answer : A

5 : Sucrose is formed by the dehydration synthesis reaction between two glucose molecules.a. Trueb. False
A : true
B : false

Correct Answer : B

6 : Lactase breaks down lactose into glucose and galactose.a. Trueb. False
A : true
B : false

Correct Answer : A

7 : Cellulose is a structural plant carbohydrate and is used to produce energy in the human body.a. Trueb. False
A : true
B : false

Correct Answer : B

8 : Triglycerides are found in adipocytes.a. Trueb. False
A : true
B : false

Correct Answer : A

9 : If there are only single bonds between the carbons of the fatty acid chain, the structure of the fat molecule will be straight, making the fatty acid a solid.a. Trueb. False
A : true
B : false

Correct Answer : A

10 : Eating fats speeds up the digestion process, so the body has less time to absorb the nutrients.a. Trueb. False
A : true
B : false

Correct Answer : B

11 : Enzymes in our body are unable to oxidize trans fatty acids.a. Trueb. False
A : true
B : false

Correct Answer : A

12 : Eating several oranges in one day will ensure the body has enough vitamin C for several weeks.a. Trueb. False
A : true
B : false

Correct Answer : B

13 : Enzymes in our body are unable to oxidize trans fatty acids.a. Trueb. False
A : true
B : false

Correct Answer : A

MULTIPLE CHOICE

14 : Water molecules are held together by what kind of bond?
A : hydrogen bonds
B : ionic bonds
C : covalent bonds
D : polar covalent bonds

Correct Answer : A

15 : What is the term for molecules that have both polar and non-polar regions?
A : amphipathic
B : hydrophobic
C : hydrophilic
D : covalent

Correct Answer : A

16 : The human body is composed of what percentage of water?
A : 45–75%
B : 45–95%
C : 55–75%
D : 70-95

Correct Answer : A

17 : By what process do molecules combine to form macromolecules?
A : hydrolysis
B : hydrogen bonding
C : dehydration synthesis
D : protein synthesis

Correct Answer : C

18 : Which type of bond links amino acids together?
A : ionic bonds
B : glycosidic bonds
C : phosphodiester bonds
D : peptide bonds

Correct Answer : D

19 : The human body can synthesize _____ of the _____ amino acids from other molecules.
A : 9, 30
B : 11, 20
C : 11, 40
D : 12, 30

Correct Answer : B

20 : What is the only way that amino acids differ?
A : by their amino groups
B : by their carboxyl groups
C : by their functional groups
D : by their bonding types

Correct Answer : C

21 : Which of the following is an essential amino acid?
A : isoleucine
B : serine
C : glutamine
D : histidine

Correct Answer : A

22 : What is the name for the three-dimensional shape that constitutes the functional structure of a protein?
A : primary structure

B : secondary structure
C : tertiary structure
D : quaternary structure

Correct Answer : C

23 : Which of the following statements is true with respect to RNA and DNA?
A : DNA contains the stored information for protein synthesis within the nucleotides adenine, thymine, guanine, and uracil.
B : RNA is a single-stranded nucleic acid molecule transcribed from a DNA gene sequence that codes for the synthesis of a protein.
C : DNA is a double helix whereby two strands of DNA bind together by the phosphate groups.
D : In DNA, two hydrogen bonds form between adenine and thymine, and three hydrogen bonds hold guanine and uracil together.

Correct Answer : B

24 : What is the ratio of carbon to hydrogen to oxygen in carbohydrates?
A : 1:1:2
B : 2:1:2
C : 1:2:2
D : 1:2:1

Correct Answer : D

25 : Which of the following is NOT a major complex carbohydrate relevant to the human body?
A : starch
B : glycogen
C : glucose
D : cellulose

Correct Answer : C

26 : Which of the following refers to hydrophilic molecules?
A : They are insoluble in water.
B : They are water soluble.
C : They are neutral in water.
D : They are highly reactive in water.

Correct Answer : B

27 : By which process can the result of hydrolysis be reversed?
A : polymerization
B : dehydration synthesis
C : addition of an amino group
D : addition of a hydroxyl group

Correct Answer : B

28 : The storage form of carbohydrates is ____ in animals and ____ in plants.
A : glycogen, cellulose
B : starch, glycogen
C : cellulose, glycogen

D : glycogen, starch

Correct Answer : D

29 : Margarine is formed by which of the following processes?
A : hydrogenation
B : polymerization
C : hydration
D : hydrolysis

Correct Answer : A

30 : Which of the following refers to fatty acids with double bonds between some of their carbons?
A : saturated
B : unsaturated
C : hydrogenated
D : trans fats

Correct Answer : B

31 : What is a phospholipid is composed of?
A : two non-polar fatty acid chains and a polar head containing a glycerol and a phosphate group
B : one non-polar fatty acid chain and three phosphate groups
C : three polar fatty acid chains and a polar head containing a glycerol and a phosphate group
D : one non-polar fatty acid chain and two non-polar heads

Correct Answer : A

32 : Which of the following lists contains the three essential fatty acids?
A : linoleic acid, aspartic acid, and glutamic acid
B : aspartic acid, linoleic acid, and glutamic acid
C : alpha-linoleic acid, oleic acid, and glutamic acid
D : alpha-linoleic acid, linoleic acid, and oleic acid

Correct Answer : D

33 : Which of the following describes peptide bonds?
A : They form between fatty acids.
B : They form by a hydrolysis reaction.
C : They link amino acids.
D : They form between monosaccharides.

Correct Answer : C

34 : Which of the following statements does NOT describe a role of cholesterol in human physiology?
A : It is a major constituent of cell membranes.
B : It is involved in the production of mood hormones.
C : It is starting material for production of steroid hormones.
D : It is used by the liver to make bile.

Correct Answer : B

35 : Sarah and MelanieSarah and Melanie finish their soccer game on a hot summer day and decide to go for a snack at Dairy Queen. Sarah orders a banana split, and Melanie orders a hamburger and fries. Both girls enjoy their treats as they continue to discuss the outcome of their soccer game. After a while Sarah starts to feel bloated and experiences stomach pains. She recalls that this has been frequently occurring when she eats certain foods.What should Sarah do?
A : Nothing, this is normal.
B : Go to sleep and hope she feels better.
C : Refrain from ingesting lactose in the future as she may have developed an inability to produce lactase.
D : Go immediately to the hospital as she likely has an obstructed bowel.

Correct Answer : C

36 : Sarah and MelanieSarah and Melanie finish their soccer game on a hot summer day and decide to go for a snack at Dairy Queen. Sarah orders a banana split, and Melanie orders a hamburger and fries. Both girls enjoy their treats as they continue to discuss the outcome of their soccer game. After a while Sarah starts to feel bloated and experiences stomach pains. She recalls that this has been frequently occurring when she eats certain foods.What has Melanie just consumed a large amount of?
A : protein
B : essential fatty acids
C : triglycerides
D : amino acids

Correct Answer : C

37 : Which of the following describes the primary structure of protein?
A : It is an alpha helix or beta pleated sheet.
B : It is maintained by hydrogen bonds.
C : It is composed of two or more polypeptide chains.
D : It is the amino acid sequence of a polypeptide chain.

Correct Answer : D

38 : What are cell membranes primarily composed of?
A : essential fatty acids
B : phospholipids
C : polysaccharides
D : nucleic acids

Correct Answer : B

39 : A deficiency in which of the following minerals may cause muscular twitching?
A : phosphorus
B : calcium
C : iron
D : iodine

Correct Answer : B

40 : A mother gives birth to a baby at 38 weeks gestation. The baby is born with neural tube defects. Which of the following vitamins may the mother have been deficient in during

pregnancy?
A : vitamin A
B : vitamin D
C : folic acid
D : biotin

Correct Answer : C

41 : If you eat French fries every day, which of the following will most likely result?
A : It will decrease blood sugar levels.
B : It will decrease insulin production.
C : It will increase blood sugar levels.
D : It will help control appetite.

Correct Answer : C

42 : Which of the following is NOT one of the effects of eating fibre?
A : It adds bulk to large intestine.
B : It acts as a prebiotic.
C : It increases the risk of bowel disease.
D : It helps regulate immune functions.

Correct Answer : C

43 : Which of the following is NOT a method used in refining oils?
A : bleaching
B : deodorizing
C : toasting
D : oxidizing

Correct Answer : D

44 : Which of the following is NOT a macromolecule?
A : phospholipid
B : RNA
C : polypeptide
D : fructose

Correct Answer : D

45 : Which of the following is an example of a hydrophobic molecule?
A : glucose
B : salt
C : hydocarbon chain of fatty acid
D : amino acid

Correct Answer : C

46 : Which of the following is a monosaccharide?
A : sucrose
B : galactose
C : maltose
D : glycogen

Correct Answer : B

47 : Which of the following is the monomer for RNA?
A : Amino acid
B : Ribose
C : Cholesterol
D : Nucleotide

Correct Answer : D

48 :

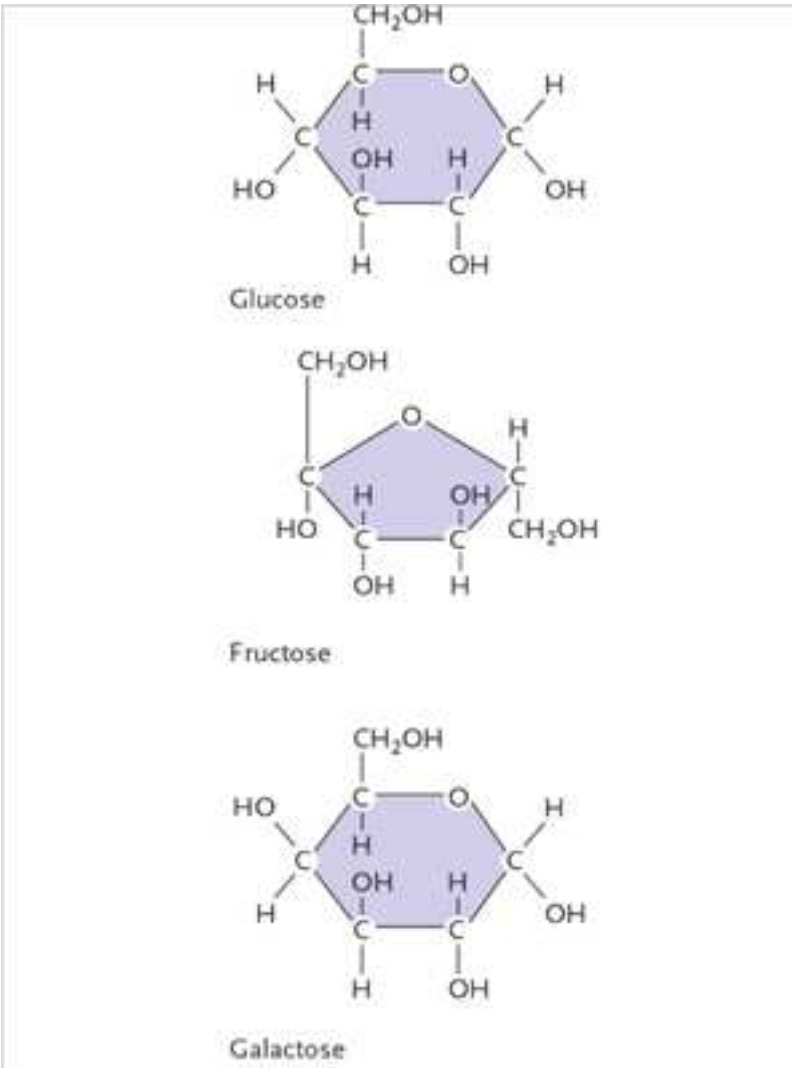


Figure 2.15 Monosaccharides
The three monosaccharides—glucose, fructose, and galactose—have the same chemical formula $C_6H_{12}O_6$ and slightly different chemical structures.

What is this molecule?
A : monosaccharide
B : amino acid
C : ribose
D : cholesterol

Correct Answer : A

49 : Which of the following is the process for forming bonds between monomers?
A : polymerization
B : denaturation

C : dehydration
D : hydrolysis

Correct Answer : A

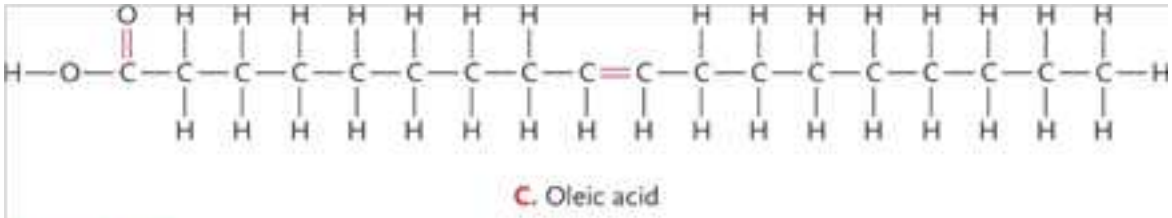
50 : If a molecule is composed of a carboxyl group, an amino group, a hydrogen, and a functional group, what kind of molecule it?
A : amino acid
B : nucleotide
C : fatty acid
D : disaccharide

Correct Answer : A

51 : Which of the following is an example of a protein of the extracellular matrix?
A : actin
B : blood type molecules
C : antibodies
D : collagen

Correct Answer : D

52 :



C. Oleic acid

Figure 2.21 Alpha-Linolenic Acid, Linoleic Acid, and Oleic Acid

The three essential fatty acids are (A) alpha-linolenic acid (omega 3), (B) linoleic acid (omega 6), and (C) oleic acid (omega 9).

What is this molecule?
A : cis fatty acid
B : trans fatty acid
C : polyunsaturated fatty acid
D : saturated fatty acid

Correct Answer : A

53 : What is the complementary strand of DNA for CTGGATAC?
A : CTGGATAC
B : GACCUAUG
C : CAUAGGUTC
D : GACCTATG

Correct Answer : D

54 : What is the primary type of fat that you would find in olive oil?
A : saturated fat
B : unsaturated fat
C : trans fat
D : phospholipid

Correct Answer : B

55 : Which of the following is NOT important for protein function?
A : The amino acid sequence.
B : The secondary structure.
C : The tertiary structure.
D : The number of amino acids.

Correct Answer : D

56 : If a fat is solid at room temperature, it is most likely which of the following?
A : Saturated
B : Unsaturated
C : polymerized
D : hydrolyzed

Correct Answer : A

57 : Which of the following is NOT a type of protein?
A : antibody
B : enzyme
C : membrane channel
D : glycogen

Correct Answer : D

58 : Which of the following is an example of an enzyme?
A : hemoglobin
B : collagen
C : polymerase
D : ion channels

Correct Answer : C

59 : What bonds are broken in a denatured protein?
A : peptide bonds
B : hydrogen bonds
C : glycosidic bonds
D : phosphodiester bonds

Correct Answer : B

60 : Which of the following has thymine?
A : DNA
B : RNA
C : both DNA and RNA
D : neither DNA nor RNA

Correct Answer : A

61 : What is lactose composed of?
A : glucose and galactose
B : glucose and glucose

C : fructose and glucose
D : maltose and glucose

Correct Answer : A

62 : Which of the following is most commonly used by our cells to make ATP?
A : cellulose
B : peptides
C : glucose
D : amino acids

Correct Answer : C

63 :

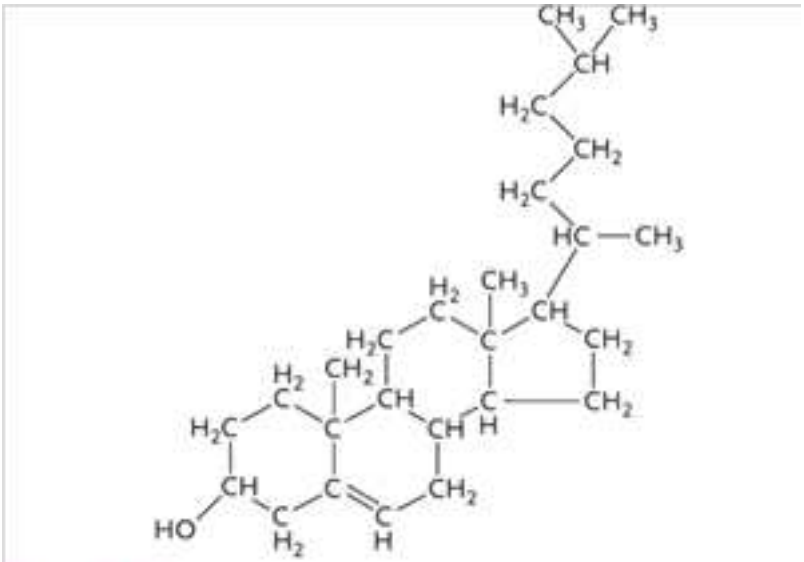


Figure 2.22 Cholesterol

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What is this molecule?
A : cholesterol
B : phospholipid
C : monounsaturated fat
D : triglyceride

Correct Answer : A

64 : Which of the following is a structural polysaccharide found in plant cells that we eat but do not digest?
A : glycogen
B : glucose
C : starch
D : cellulose

Correct Answer : D

65 : Which of the following is NOT found in human cell membranes?
A : phospholipids
B : triglycerides
C : ribosomes
D : cholesterol

Correct Answer : D

66 : Which of the following is an essential fatty acid?
A : omega 3
B : cholesterol
C : trans fats
D : saturated fats

Correct Answer : A