

Molecules Quiz

Question 1: Which statement best describes how alpha and beta D glucose differ?

- A) Alpha glucose has a ring structure, while beta glucose has a linear structure.
- B) Alpha glucose has more oxygen atoms than beta glucose.
- C) Alpha glucose has a hydroxyl group up at carbon 1, while beta glucose has it down.
- D) Alpha glucose has a hydroxyl group down at carbon 1, while beta glucose has it up.

Question 2: Plants produce cellulose. This molecule is a polymer of:

- A) alpha-D-Glucose
- B) beta-D-Glucose
- C) alpha-L-Glucose
- D) beta-L-Glucose

Question 3: Which statement best compares amylose and amylopectin?

- A) Amylose is composed of alpha-D-glucose, whereas amylopectin is composed of fructose.
- B) Amylose has more alpha-D-glucose residues than amylopectin.
- C) Amylose is a straight-chain, helical polymer of glucose, whereas amylopectin is highly branched.
- D) Amylose is unbranched, whereas amylopectin is a cyclic polymer of glucose with some branching.

Question 4: What is the main difference between amylopectin and glycogen in terms of their structure?

- A) Amylopectin has more branching than glycogen.
- B) Amylopectin has longer chains than glycogen.
- C) Amylopectin has fewer glucose units than glycogen.
- D) Amylopectin has alpha-1,4 and alpha-1,6 bonds, while glycogen has only alpha-1,4 bonds.

Question 5: What is the name of the process that breaks down disaccharides into monosaccharides by adding a water molecule? ¹.

- A) Condensation
- B) Hydrolysis
- C) Anabolism
- D) Oxidation

Question 6: What are the monosaccharides that make up maltose?

- A) Glucose and fructose
- B) Glucose and galactose
- C) Fructose and galactose
- D) Glucose and glucose

Question 7: Which part of an amino acid is unique to each amino acid?

- a) The alpha carbon
- b) The carboxyl group
- c) The amino group
- d) The R group

Question 8: What is the main difference between the structure of trans fats and cis unsaturated fats?

- a) Trans fats have double bonds, while cis unsaturated fats have single bonds
- b) Trans fats have hydrogens on opposite sides of the double bond, while cis unsaturated fats have hydrogens on the same side
- c) Trans fats have bent carbon chains, while cis unsaturated fats have straight carbon chains
- d) Trans fats are liquid at room temperature, while cis unsaturated fats are solid

References:

Q1: [20.3: The Structure and Properties of D-Glucose - Chemistry LibreTexts](#)

Q2: [Cellulose - Chemistry LibreTexts](#)

Q3: [Amylose - an overview | ScienceDirect Topics](#)

Q4: [Difference Between Amylopectin and Glycogen | Compare the Difference Between Similar Terms](#)

Q5: [14.6: Disaccharides - Chemistry LibreTexts](#)

Q6: [Maltose - Structure, Formula, Properties, Production, Uses \(byjus.com\)](#)

Q7: [Amino acid | Definition, Structure, & Facts | Britannica](#)

Q8: [Cis Fat vs Trans Fat - Difference and Comparison | Diffen](#)