

BIO-168 Prerequisite Assessment Test

Multiple choice. Choose the one alternative that best completes the statement or answers the question.

- 1) The weakest bond between two atoms is the _____ bond.
 - A) polar
 - B) ionic
 - C) hydrogen
 - D) covalent
 - E) nonpolar

- 2) All of the following are true concerning enzymes, **except** that they
 - A) affect only the rate of a chemical reaction.
 - B) lower the activation energy required for a reaction.
 - C) function as biological catalysts.
 - D) are proteins.
 - E) are consumed during the reaction.

- 3) During ionization, water molecules disrupt the ionic bonds of a salt to produce a mixture of ions. These ions can carry a current and so are called
 - A) electrolytes.
 - B) cations.
 - C) anions.
 - D) acids.
 - E) counterions.

- 4) If a substance has a pH that is greater than 7, it is
 - A) alkaline
 - B) neutral.
 - C) acidic.
 - D) a salt.
 - E) a buffer.

- 5) You would expect a peptide bond to link
 - A) two amino acids.
 - B) two simple sugars.
 - C) a sugar and a peptide.
 - D) two nucleotides.
 - E) a peptide and a fatty acid.

- 6) The smallest living unit within the human body is
 - A) an organ.
 - B) the cell.
 - C) a protein.
 - D) an organ system.
 - E) a tissue.

- 7) The plasma membrane is composed of
 - A) carbohydrate molecules.
 - B) carbohydrates and proteins.
 - C) a bilayer of phospholipids.
 - D) a bilayer of proteins.
 - E) carbohydrates and lipids.

- 8) Most of the ATP required to power cellular operations is produced in the
- A) mitochondria.
 - B) cytoplasm.
 - C) cilia.
 - D) endoplasmic reticulum.
 - E) nucleus.
- 9) Most of a cell's DNA is located in its
- A) lysosomes.
 - B) nucleolus.
 - C) nucleus.
 - D) Golgi apparatus.
 - E) ribosomes.
- 10) The movement of oxygen from an area of high concentration to an area of low concentration is an example of
- A) active transport.
 - B) diffusion.
 - C) osmosis.
 - D) facilitated transport.
 - E) filtration.