Ch 10 study guide

1. Each organism has a unique combination of characteristics encoded in molecules of

a. protein. c. carbohydrates.

b. enzymes. d. DNA.

2. The primary function of DNA is to

a. make proteins.

b. store and transmit genetic information.

c. control chemical processes within cells.

d. prevent mutations.

3. All of the following are true about the structure of DNA *except*

a. short strands of DNA are contained in chromosomes inside the nucleus of a cell.

b. every DNA nucleotide contains a sugar, a phosphate group, and a base.

c. DNA consists of two strands of nucleotides joined by hydrogen bonds.

d. the long strands of nucleotides are twisted into a double helix.

4. Molecules of DNA are composed of long chains of

a. amino acids. c. monosaccharides.

b. fatty acids. d. nucleotides.

5. Which of the following is *not* part of a molecule of DNA?

a. deoxyribose c. phosphate

b. nitrogenous base d. ribose

6. A nucleotide consists of

a. a sugar, a protein, and adenine.

b. a sugar, an amino acid, and starch.

c. a sugar, a phosphate group, and a nitrogenous base.

d. a starch, a phosphate group, and a nitrogenous base.

7. The part of the molecule for which deoxyribonucleic acid is named is the

a. phosphate group.

b. sugar.

c. nitrogenous base.

d. None of the above; DNA is not named after part of the molecule.

8. Purines and pyrimidines are

a. bases found in amino acids.

b. molecules that can replace phosphate groups from defective DNA.

c. names of specific types of DNA molecules.

d. bases found in nucleotides.

9. The scientists credited with establishing the structure of DNA are

a. Avery and Chargaff. c. Mendel and Griffith.

b. Hershey and Chase. d. Watson and Crick.

10. X-ray diffraction photographs by Wilkins and Franklin suggested that

a. DNA and RNA are the same molecules.

b. DNA is composed of either purines or pyrimidines, but not both.

c. DNA molecules are arranged as a tightly coiled helix.

d. DNA and proteins have the same basic structure.