Name:

1. What are the basic structural units of a DNA molecule?
   (1) glucose molecules (3) lipids
   (2) amino acids (4) nucleotides

2. The individuality of an organism is determined by the
   (1) sequence of nitrogenous bases in deoxyribonucleic acid
   (2) number of amino acids in a cell
   (3) position of the ribosomes on the endoplasmic reticulum
   (4) number of nitrogenous bases in a codon

3. The nitrogen bases found in DNA are represented by the letters
   (1) A, U, G, and C (3) T, A, P, and C
   (2) A, T, G, and C (4) T, U, G, and C

4. Which components of DNA are held together by weak hydrogen bonds?
   (1) phosphate and adenine
   (2) phosphate and deoxyribose
   (3) thymine and deoxyribose
   (4) cytosine and guanine

5. Which event takes place first during DNA replication?
   (1) A single-stranded RNA molecule is formed.
   (2) Transfer RNA links to an amino acid.
   (3) Free nucleotides are bonded together in the correct sequence.
   (4) The DNA molecule "unzips" along weak hydrogen bonds.

6. The function of the coded instructions contained in the body cells of an organism is to
   (1) form a variety of gametes that will pass on hereditary information
   (2) direct the synthesis of proteins necessary for proper cell function
   (3) synthesize different kinds of amino acids in a specific sequence
   (4) produce the inorganic molecules needed for normal cell growth

7. Which nucleic acid carries instructions from the nucleus to the cytoplasm?
   (1) DNA, only
   (2) Messenger RNA, only
   (3) Transfer RNA, only
   (4) DNA, messenger RNA, and transfer RNA

8. A high concentration of an enzyme that breaks down RNA molecules is introduced into a cell. Which cellular activity would probably be affected first?
   (1) metabolism of fats
   (2) synthesis of proteins
   (3) hydrolysis of ATP
   (4) oxidation of glucose

9. Amino acid molecules are bonded together in a specific sequence on cell structures known as
   (1) ribosomes (3) mitochondria
   (2) vacuoles (4) centromeres

10. The sequence of amino acids that make up a molecule is determined by the sequence of
    (1) nitrogenous bases in DNA
    (2) sugars in RNA
    (3) cytoplasmic genes in the nucleus
    (4) ribosomes on the endoplasmic reticulum