

**SECTION 10-3 REVIEW****PROTEIN SYNTHESIS****VOCABULARY REVIEW** Define the following terms.

1. codon \_\_\_\_\_  
\_\_\_\_\_
2. translation \_\_\_\_\_  
\_\_\_\_\_
3. anticodon \_\_\_\_\_  
\_\_\_\_\_

**MULTIPLE CHOICE** Write the correct letter in the blank.

- \_\_\_\_\_ 1. A protein is a polymer consisting of a specific sequence of
- a. amino acids.
  - b. fatty acids.
  - c. RNA nucleotides.
  - d. DNA nucleotides.
- \_\_\_\_\_ 2. The genetic code specifies the correlation between
- a. a DNA-nucleotide sequence and an RNA-nucleotide sequence.
  - b. an mRNA-nucleotide sequence and a tRNA-nucleotide sequence.
  - c. an mRNA-nucleotide sequence and an rRNA-nucleotide sequence.
  - d. an RNA-nucleotide sequence and an amino-acid sequence.
- \_\_\_\_\_ 3. During translation, one end of a tRNA molecule pairs with a complementary
- a. nucleotide sequence in DNA.
  - b. mRNA codon.
  - c. tRNA molecule.
  - d. protein molecule.
- \_\_\_\_\_ 4. One binding site on a ribosome holds an mRNA molecule, and the other two binding sites hold
- a. two other ribosomes.
  - b. DNA.
  - c. tRNA molecules.
  - d. rRNA molecules.
- \_\_\_\_\_ 5. Two amino acids are linked by a peptide bond when
- a. two ribosomes attach simultaneously to the same mRNA transcript.
  - b. two tRNAs pair with neighboring codons on an mRNA transcript.
  - c. two codons on an mRNA transcript bind to each other.
  - d. a ribosome attaches to two codons on an mRNA transcript.

**SHORT ANSWER** Answer the questions in the space provided.

- List, in order, the tRNA anticodons that are complementary to the mRNA sequence AUGCAUGCAAGUUAG. \_\_\_\_\_  
 How many amino acids will be in the polypeptide that is initially formed when this mRNA sequence is translated? \_\_\_\_\_
- Explain why methionine is the first amino acid in every growing polypeptide. \_\_\_\_\_  
 \_\_\_\_\_
- What determines whether a protein is exported from a cell or used inside the cell? \_\_\_\_\_  
 \_\_\_\_\_
- Critical Thinking** How would a deletion of one nucleotide in the middle of an mRNA transcript affect the polypeptide specified by that transcript? \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**STRUCTURES AND FUNCTIONS** Label each part of the figure in the spaces provided.

The diagram below summarizes the events that occur during translation.

