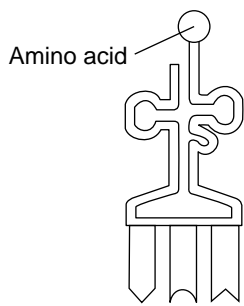


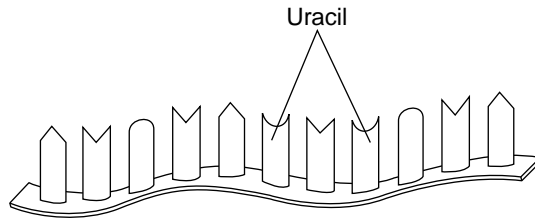
Chapter 12 DNA and RNA

Chapter Vocabulary Review

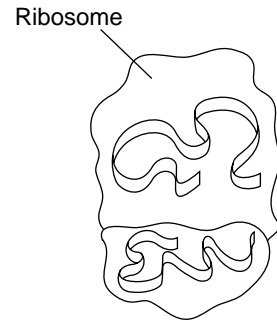
Labeling Diagrams *On the lines provided, identify each kind of RNA.*



1. _____



2. _____



3. _____

Matching *On the lines provided, write the letter of the answer that best matches each description.*

- | | |
|---------------------------|---|
| _____ 4. transformation | a. process in which one strain of bacteria changes into another one |
| _____ 5. bacteriophage | b. process in which DNA makes a copy of itself |
| _____ 6. histone | c. protein that DNA wraps around in eukaryotic chromosomes |
| _____ 7. replication | d. virus that infects bacteria |
| _____ 8. DNA polymerase | e. signal in DNA that indicates to an enzyme where to bind to make RNA |
| _____ 9. promoter | f. a change in the genetic material |
| _____ 10. introns | g. sections of RNA molecules that are removed before a eukaryotic gene becomes functional |
| _____ 11. codon | h. a group of genes that operate together |
| _____ 12. mutation | i. three nucleotides that specify a single amino acid to be added to a polypeptide |
| _____ 13. polyploidy | j. process in which cells become specialized in structure and function |
| _____ 14. operon | k. the principal enzyme involved in DNA replication |
| _____ 15. differentiation | l. condition of having extra sets of chromosomes |

Completion *On the lines provided, complete the following sentences:*

16. A(an) _____ is made up of three parts: a deoxyribose sugar, a phosphate group, and a nitrogenous base.
17. The principle of _____ states that hydrogen bonds can form only between certain bases in DNA.

18. Eukaryotic chromosomes contain both DNA and protein tightly packed together to form a substance called _____.
19. During the process of _____, RNA molecules are produced by copying part of the nucleotide sequence of DNA into a complementary sequence in RNA.
20. The enzyme that uses one strand of DNA as a template to assemble nucleotides into a strand of RNA is called _____.
21. After introns have been cut out of RNA molecules, the remaining pieces called _____ are spliced together.
22. The decoding of an mRNA message into a protein is known as _____.
23. The three bases on the tRNA molecule that are complementary to one of the mRNA codons are called a(an) _____.
24. When the *lac* repressor protein binds to the _____, the *lac* operon is turned off.
25. A series of genes, called the _____, controls the development of organs and tissues in various parts of an embryo.