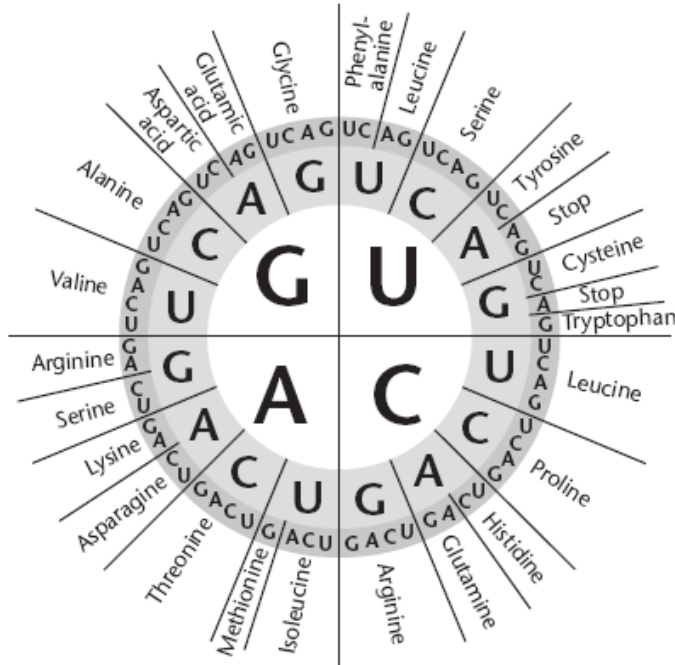


## 13.2 Ribosomes and Protein Synthesis

### The Genetic Code

Use the diagram to answer Questions 1–7.

1. What are the words along the outside of the circle?



2. What can you find by reading this diagram from the inside out?

3. For which amino acid is AAA a codon?

4. What is the codon for tryptophan?

5. For which amino acid is GGA a codon?

6. What is a codon for alanine?

7. What are three other codons for alanine?

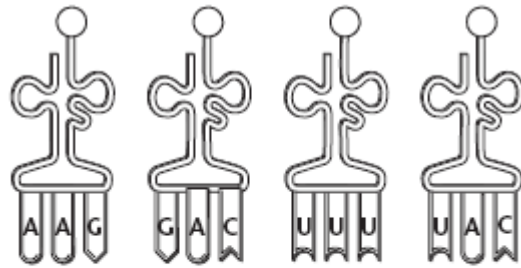
## Translation

Use the diagram to answer Questions 8–10.

8. What is the anticodon for leucine? \_\_\_\_\_
9. What is the codon for leucine? \_\_\_\_\_
10. List the amino acids in the order they would appear in the polypeptide coded for by this mRNA.

\_\_\_\_\_

Phenylalanine   leucine   lysine   methionine



11. What is the difference between transcription and translation?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

12. Describe the role of rRNA during translation.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## The Molecular Basis of Heredity

For Questions 14–18, write the letter of the correct answer on the line at the left.

- \_\_\_\_\_ 13. The instructions for assembling proteins are contained in the  
A. genes.  
B. ribosomes.  
C. exons.  
D. introns.
- \_\_\_\_\_ 14. The central dogma of molecular biology is that information is transferred from  
A. RNA to protein to DNA.  
B. DNA to protein to RNA.  
C. protein to DNA to RNA.  
D. DNA to RNA to protein.
- \_\_\_\_\_ 15. An exception to the central dogma is  
A. the infection of a virus by a bacteriophage.  
B. the ability of some viruses to transfer information from RNA to DNA.  
C. the expression of different genes during different stages of development.  
D. the translation of the codon into the anticodon of tRNA.