Protein Synthesis Reading Guide

As you read pg. 235-247, answer the following questions about protein synthesis

1. What is DNA **replication**?

2. Where does DNA replication take place in a eukaryotic cell? _____

3. Think back to Chapter 5. When is DNA replicated during the cell cycle? _____

4. Why does DNA replication need to occur?

5. If one strand of DNA had the sequence TAGGTAC, what would be the sequence of the **complementary DNA strand**?

6. What roles do proteins play in DNA replication?

7. What must be broken for the DNA strand to separate? _____

8. Use words and drawings to summarize the 3 steps of replication

9. Human chromosomes have hundreds of _____, where the DNA is unzipped so replication can begin.

10. DNA polymerase has a _____ function that enables it to detect errors and correct them.

11. What is **transcription**?

12. Where does transcription take place in a eukaryotic cell? _____

13. What is RNA? List 3 ways it differs from DNA

14. What enzyme helps the cell to make a strand of RNA? _____

15. List and describe the 3 types of RNA. How does the name of each type of RNA tell you what it does?

16. If one complementary strand of DNA had the sequence TAGGTAC, what would be the sequence of the **mRNA strand**?

17. What is **translation**?

18. Where does translation take place in a eukaryotic cell? _____

19. What is a **codon**?

20. List 3 examples of codons and the proteins they code for.