Review for DNA, RNA and Protein Synthesis

Chapter 10

Write the following questions on your own paper and answer them.

1. What differences in DNA gives each organism its own unique look?

2. Why is DNA called a universal code?

3. What macromolecule is DNA and RNA?

4. How are genes coded for in DNA

5. Why does DNA replicate?

6. How is DNA inherited?

7. Describe how DNA replicates? (makes a copy of itself) Using the words: DNA helicase, DNA polymerase, base pair rule, semi conservative replication

8. Give the complimentary strand to this DNA strand: CCTAGGA.

9. What was DNA named after?

10. What is a nucleotide? (made up of?)

11. Describe the structure of DNA. What makes up the (backbone) sides? What is the base pair rule? What bonds are involved?

12. What does the word complementary mean – when discussing DNA?

13. DNA is used as a template to make what RNA?

14. During protein synthesis what is the flow of information? From DNA to……

15. What does DNA code for?

16. Describe transcription: what does it make? Where does it occur

17. Describe translation: what does it make? Where does it occur? What RNA’s are involved?

18. What is the function of tRNA? At one end is a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_and the other \_\_\_\_\_\_\_

19. What is a codon? If you have a codon of AUG what is the anticodon?

20. What is a mutation?

21. What happens if a mutation occurs in a somatic cell? Or in gametes?

22. Do all mutations affect DNA? And changes in protein sequence?

23. What is a point mutation?

24. What type of mutation would cause the remaining codons to group incorrectly?

25. What would happen if the mutation stopped the addition of amino acids too early?

26. What is sickle-cell anemia?

27. What can mutation of an organism’s DNA lead to?

28. What causes mutations?