

Study Guide- Unit 5: DNA (Chapter 12) and Protein Synthesis (Chapter 13)

Answer the following questions using your lecture notes, textbook, and other study charts. Remember, this is a study guide and the test is NOT limited to just the information here.

A) In your textbook, turn to pages 356-358 and answer the **selected** question by putting the answers in the space below.

1.	9	18.	21.
2.	10	19.	
3.	11	20.	

In your textbook, turn to pages 386-388 and answer the **selected** question by putting the answers in the space below.

1.	9.	19.
2.	10.	20.
8.	18.	

B). Answer the following questions using your textbook and lecture notes.

1. Describe the importance of the following scientists to the study and discovery of DNA:

a. Griffith

b. Avery

c. Hershey-Chase

d. Watson and Crick

e. Chargaff

f. Franklin

2. Draw and label a picture of a DNA nucleotide.

3. What does “complimentary base pairing” mean?

4. a) How are the two strands of DNA held together? _____

b) What kind of bonds holds the backbone of DNA together? _____

5. a) If DNA is a “twisted ladder” what are the rungs of the ladder made of? _____

b) What are the sides of the ladder made of? _____

6. Describe the relationship between DNA, histones, chromatin, and chromosomes.

7. What is the difference between a codon and an anticodon?

8. If the code on a DNA is CTA, what is the mRNA codon? _____

What would be the tRNA anticodon? _____

What would be the amino acid? _____

9. Where does transcription happen? _____

Translation? _____

DNA replication? _____

10. a) What enzyme is involved in transcription? _____

b) What are its two functions? _____

11. a) What enzyme is involved in DNA replication? _____

b) Describe its two functions _____

12. a) Compare and contrast DNA and RNA ; give 2 similarities and 3 differences.

b) List the three main types of RNA and describe the function of each.

13. What is the connection between a sequence of DNA and a protein?

14. If the sequence of DNA is TACCTTATACCG

- give the mRNA sequence _____
- tRNA sequence _____
- amino acids _____

15 a) How many mRNA bases are in 5 codons? _____

b) If there are 21 mRNA bases, how many codons are there? _____

16. List the two types of gene mutations and describe how they are different.

Ways to Study/Review

1. Review **all** lecture notes and readings.
2. Answer the questions at the end of EACH section AND chapter.
3. Study with a friend (not just socialize).
4. Look over old study guides.
5. Flashcards
6. Putting lecture notes into your own words
7. Make yourself a test and take it. Also, have a friend make a test too and exchange tests.
8. Come into class with questions!
9. Review a little each day.... Do not cram the night before!



My child has studied this study guide for at least 20 minutes (2 bonus points)

(Parent/guardian signature)