

Name: _____

Date: _____

- [2 pt] 1. What intermolecular force is responsible for the formation of a double helix in DNA?
- [2 pt] 2. What is meant by the term: complementary base pairs? List the complementary base pairs. Why are they important.
- [4 pt] 3. Define the term 'replication' and briefly describe the process. DNA is composed of two strands, what is the difference in how the strands are copied?
- [6 pt] 4. A segment of a DNA **template** strand consists of: TCA-ATA-CCC-GCG.
- (a) What is the nucleotide order in the complementary mRNA?
 - (b) What is the anticodon order of the individual tRNA that corresponds to the mRNA strand?
 - (c) What is the sequence of amino acids coded by the mRNA?

CHE 102 - Homework - Ch 31b

[5 pt] 5. What are (5) differences between DNA and RNA?

[4 pt] 6. Define the term 'transcription'. What three molecules are produced in transcription? What is the primary use of each of the three types of RNA?

[4 pt] 7. Define the term 'posttranscription modification' and briefly describe what types of changes can be made.

[3 pt] 8. Briefly describe how the structure of tRNA allows it to function.

[3 pt] 9. How is the direction in which a protein is built controlled? (ie Why do we always build from the N-terminal to C-terminal end?)

CHE 102 - Homework - Ch 31b

[12 pt] 10. Starting with DNA, briefly outline the biosynthesis of proteins. (Discuss: Preparation, Initiation, Elongation and Termination.)