

NAME \_\_\_\_\_

Block \_\_\_\_\_

**BIOLOGY 12: CHAPTER 25/26.1 - REVIEW WORKSHEET**  
**DNA REPLICATION, PROTEIN SYNTHESIS, & RECOMBINANT DNA**

**A. DEOXYRIBONUCLEIC ACID (DNA)**

1. Where are the genes found in a cell? Name the two groups of nitrogenous bases found in chromosomes.  
\_\_\_\_\_  
\_\_\_\_\_
2. List the three subunits of every nucleotide found in nucleic acid. What are the specific pairings of the bases in DNA?  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
3. The two \_\_\_\_\_ of DNA twist about one another to form a \_\_\_\_\_ helix with the two strands held together by \_\_\_\_\_ bonds between the purines and pyrimidines.
4. How does the structure of unwound DNA compare to that of a ladder?  
\_\_\_\_\_  
\_\_\_\_\_
5. Name the two scientists that first determined the structure of DNA.  
\_\_\_\_\_  
\_\_\_\_\_

How did Rosalind Franklin contribute to determining the structure of DNA? 15. P

What type of \_\_\_\_\_ 16. V

e protein. Which two? 6. Given the following three mRNA sequences, 2 code for the same

- #1. AGU UUA GCA ACG AGA UCA
- #2. UCG CUA GCG ACC AGU UCA
- #3. AGC CUC GCC ACU CGU AGU

hemoglobin and the base 7. Below is the base sequence for the normal protein for normal I  
sequence for the sickle cell hemoglobin.

Normal GGG CTT CTT TTT  
Sickle GGG CAT CTT TTT