

Problem Set 25: Nucleic Acids

1. What base and what sugar are in the following nucleosides and nucleotides?
 - a. deoxyadenosine
 - b. uridine
 - c. deoxyguanosine
 - d. guanosine 5'-monophosphate
2. Label the following as a base, sugar, nucleoside or nucleotide.
 - a. deoxyribose
 - b. adenosine
 - c. thymine
 - d. deoxyguanosine
 - e. cytidine
 - f. deoxythymidine 5'-monophosphate
3. Why is there a prime (') symbol after the 3 or the 5 when writing a DNA sequence?
4. What base is found only in RNA, and what base is found only in DNA?
5. Which bases are found in both RNA and DNA?
6. How are nucleotides connected in a polynucleotide chain?
7. What kind of intermolecular forces of attraction hold the DNA double helix together?
8. How is 3' CAT 5' different from 5' CAT 3'?
9. In the double helix, what would be the complementary strand for the following:
5' ACA TCT GGG CGT ATA CGT 3'