AP BIOLOGY
REVIEW FOR NUCLEIC ACID TEST

1. What types of nucleic acids are present in eukaryotic cells? Describe their functions.

2. What does antiparallel mean?

3. What is semi conservative replication?

4. What type of organic molecules are pentoses and what is their role in nucleic acids?

5. What type of bonds are present between the molecules that make up the "rails" or "backbone" of the nucleic acids?

6. What type of bonds are present between the nucleic acid base pairs?

7. What bases are present in DNA? RNA?

8. What are the base pairing rules in DNA? RNA?

9. List the differences between RNA and DNA.

10. What does PCR stand for and what is its purpose?

11. List the Purines and Pyrimidines present in both DNA and RNA. Describe their structure and how they differ.

12. How many bonds are present between Adenine and Thymine? Guanine and Cytosine? What is the evolutionary significance of the these bonds?

13. How can DNA molecules be so diverse when they seem structurally the same?

14. What is a plasmid?

15. What was the premise of the experiment done by Griffith? What did it show and how was it performed so that Griffith could draw conclusions from the results?

16. What did Hershey and Chase prove with their experiment? How did they prove their theory was correct?

17. Who were Watson and Crick? What was so important about their discovery? Who was important to their findings?

18. In your opinion, do you think DNA or RNA developed first? Justify your answer.

19. Provide a complimentary strand of DNA and mRNA for the following DNA.

5'ATTTCGAGGGCTAGCAATUAG3'