Name _____

DNA Quiz

Multiple Choice (1pt each)
Directions: Read each question carefully and select the answer you feel best fits. Record your answer in the space provided.

_____ 1. The nitrogenous base Adenine can pair with _____.
   a. Adenine
   b. Cytosine
   c. Guanine
   d. Thymine

_____ 2. DNA strands run _____ in relation to each other.
   a. antiparallel
   b. parallel
   c. perpendicular
   d. both a and b

_____ 3. A nucleotide in DNA is composed of _____.
   a. a deoxyribose sugar, a phosphate, and a nitrogen base
   b. only a deoxyribose sugar and a nitrogen base
   c. only a deoxyribose sugar and a phosphate
   d. none of the above

_____ 4. Between the two strands of a DNA segment the nitrogen bases are held together by _____.
   a. covalent bonds
   b. hydrogen bonds
   c. ionic bonds
   d. metallic bonds

_____ 5. Nitrogen bases pair with bases that are _____.
   a. available
   b. complimentary
   c. identical
   d. both b and c

Matching (1pt each)
Directions: Write the letter for the answer or phrase in the space provided for each question.

_____ 6. DNA polymerase
_____ 7. deoxyribose
_____ 8. DNA replication
_____ 9. cytosine
_____ 10. DNA helicase
_____ 11. replication fork
_____ 12. nitrogen base
_____ 13. adenine
_____ 14. DNA
_____ 15. nucleotides

a. subunits that make up DNA
b. one of the two pyrimidines
c. process of making a copy of DNA
d. makes up part of a nucleotide and is made up of one or two rings of carbon
e. one of the two purines
f. abbreviation for deoxyribonucleic acid
g. enzyme that opens up the double helix by breaking hydrogen bonds
h. enzyme that adds nucleotides to a nitrogen base according to the base-pairing rules.
i. two areas formed when the double helix separates during DNA replication.
j. a five-carbon sugar

Short Answer:
Directions: Answer each question in the space provided. To receive full credit you must answer in complete sentences.

1. Create the complimentary strand for the DNA strand below. Make sure to label the parts and direction of the strand.

5'-AACGGTCCAGTCCAAGTTACG-3'

2. Below is a segment of DNA that is ready to be replicated. Show the processes that the segment will go through during replication. Make sure to include the names of the enzymes that are involved.

AATTGCCTGCTAGTCTCAG
TTAACGGACGATCAGAGTC