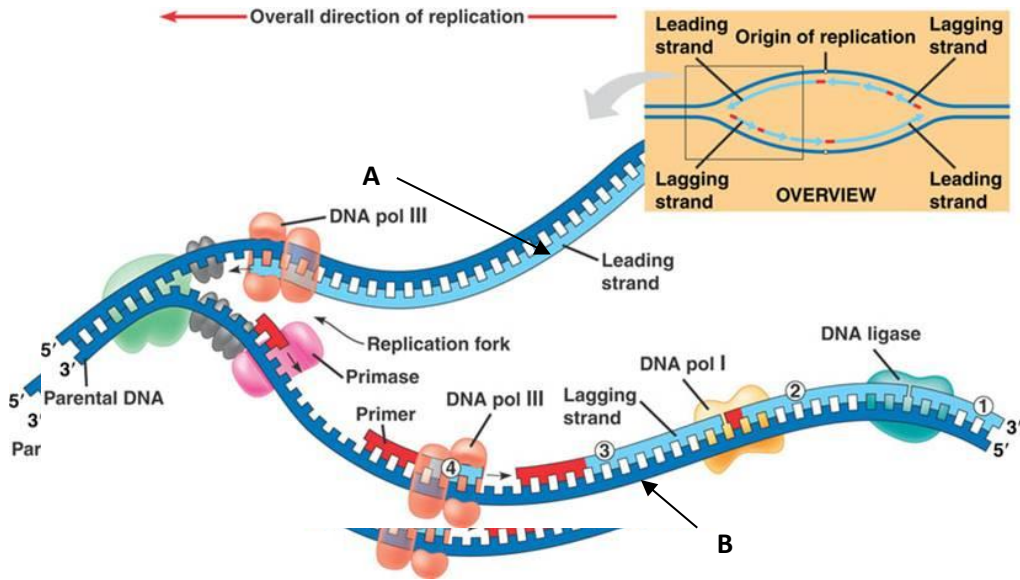# DNA Replication Quiz-Answer Key

Multiple Choice (2pt each): For each question below, select the best answer by filling in the corresponding letter and filling in the bubble on your answer sheet. You may use a scrap piece of paper to solve these problems. Also, make sure you check or mark if you are sure or unsure about the answer.

For Questions 1-5, refer to the following diagram of a DNA replication fork.

1. Leading strand of DNA replication is
   ==a. A==
   b. B
   c. Not shown in Diagram
   Sure: _____   Unsure: _____

2. Enzyme that builds short stretches of RNA(from which DNA replication can begin) during replication/
   a. Helicase
   b. Sing-strand binding proteins
   ==c. Primase==
   d. DNA Polymerase (III)

   Sure: _____   Unsure: _____

3. Enzyme that unwinds double-stranded, parental DNA during DNA replication

   a. Primase

b. DNA Liagse

c. Topoisomerase

d. Helicase
Sure: _____   Unsure: _____

4. Enzyme that joins together Okazaki fragments
    a. DNA Ligase
    b. DNA Polymerase (III)
    c. Primase
    d. Helicase

    Sure: _____   Unsure: _____
5. Enzyme that synthesis DNA continuously on the leading strand
    a. Helicase
    b. DNA Ligase
    c. DNA Polymerase (III)
    d. Primase
    Sure: _____   Unsure: _____

6. In DNA Replication, Cytosine will pair with what base in the DNA molecule
    a. Adenine
    b.Thymine
    c. Uracil
    d. Guanine

    Sure: _____   Unsure: _____
7. True or False. DNA is a polymer of amino acids put together from a peptide bonds.
    a. True
    b. False
    Sure: _____   Unsure: _____

8. In DNA Replication, Adenine will pair with what base in the DNA molecule
    a. Cytosine
    b. Thymine
    c. Uracil
    d. Guanine
    Sure: _____   Unsure: _____

9. What is the basis for the difference between how the leading and lagging strand of DNA molecules are synthesized?
    a. DNA Polymerase can work on only one strand at a time.

b. The origins of replication occur only at the 5' end.

c. DNA polymerase can join new nucleotides only to the 3' end of a growing strand.

d. Helicases and single-strand proteins work at the 5' end.

Sure: _____ Unsure: _____

10. True or False. During DNA replication, DNA polymerases proofread each nucleotide (against its template) as soon as it is added to the growing strand?

a. True

b. False

Sure: _____ Unsure: _____