

Name \_\_\_\_\_ Date \_\_\_\_\_ Section \_\_\_\_\_

**DNA Mutations Homework (remember to print it out)**

**DIRECTIONS:** Transcribe and translate the original DNA sequence. Then, create a mutated DNA sequence for each type of mutation. Additionally, determine the consequence of each mutation.

**ORIGINAL DNA SEQUENCE: TAC ACG TTG GGC AGG ACT**

**mRNA transcript:**

**Amino Acids:**

**1) Nonsense Mutation**

**MUTATED DNA SEQUENCE:**

**mRNA transcript:**

**Amino Acids:**

**CONSEQUENCE:**

**2) MISSENSE MUTATION**

**MUTATED DNA SEQUENCE:**

**mRNA transcript:**

**Amino Acids:**

**CONSEQUENCE:**

### 3) SILENT MUTATION

**MUTATED DNA SEQUENCE:**

**mRNA transcript:**

**Amino Acids:**

**CONSEQUENCE:**

### 4) FRAMESHIFT: INSERTION

**MUTATED DNA SEQUENCE:**

**mRNA transcript:**

**Amino Acids:**

**CONSEQUENCE:**

### 5) FRAMESHIFT : DELETION

**MUTATED DNA SEQUENCE:**

**mRNA transcript:**

**Amino Acids:**

**CONSEQUENCE:**