

# 2026 Spring BIOL 1209

## Section 10, Quiz 02

Name: \_\_\_\_\_

Bench: \_\_\_\_\_

Date: \_\_\_\_\_

Time: 10 min

Max. points: 10

1. In your last lab you used an AMP like PopGen to obtain a graph of **fitness vs p(A)** for a population. (2 pt)
  - a. What was the dependent variable for this experiment? \_\_\_\_\_
  - b. What was the independent variable for this experiment? \_\_\_\_\_
2. In the replica plating experiment, you used three fresh plates, namely Control, High-Tet and Low-Tet. What is the correct order in which to perform the replica plating with these three plates, so as to prevent bias? (2 pt)
3. In a given population, list the values of  $p(A)$  when: (4 pt)
  - a. Allele **A** has been **lost** \_\_\_\_\_
  - b. Allele **A** has been **fixed** \_\_\_\_\_
  - c. Allele **a** has been **lost** \_\_\_\_\_
  - d. Allele **a** has been **fixed** \_\_\_\_\_
4. The ability to taste phenylthiocarbamide (PTC) in humans is determined by a gene with two alleles *T* and *t*. Human beings carrying the dominant allele *T* can taste PTC. In a population where  $p(T) = 0.4$ , what is the frequency/fraction of successful tasters, assuming it follows Hardy-Weinberg equilibrium? Show your work. (2 pt)