**Statistical Genomics (545)**

Spring 2021

**Quiz**

Open book

Due on April 12, 2021, 3:10pm

First name:

Last Name:

Pre-recorded lecture: Bayes Theory

**Instruction**: Highlight the best answer **(ONLY** **ONE**) for each question. Email this file to TA (Zhou Tang, email: zhou.tang@wsu.edu) with subject of StaGen545QuizzesYYYYMMDD

1. The left and right side of Bayesian theorem are P(A|B)P(B) and P(B|A)P(A). The middle should be:

A. ∝

B. =

C. <

D. >

2. The left and right side of Bayesian transformation involve conditional probability. The middle should be:

A. ∝

B. =

C. <

D. >

3. The left side of Bayesian transformation is a conditional probability of P(A|B) and right side is product of

A. P(A|B) and P(B|A)

B. P(A) and P(B)

C. P(B|A) and P(A)

D. P(A|B) and P(B)

4. A breeder conducts MAS on a marker with genotype frequency of 60%, 30% and 10% for AA, AT and TT genotypes. Half on individuals with AT express disease, 75% of AA and 25% of TT express disease. The breeder uses only the individual with non-disease to generate next generation. What is the expected frequency for TT in the next generation?

A. 7.5%

B. 10%

C. 15%

D. 20%