

Name:

ANT 3514 – Introduction to Biological Anthropology
Forces of Evolution
Lab 6, Week of 9/29/03

Question 1: (1 point)

What are the four forces of evolution? Which one is Darwinian?

Question 2: (1 point)

How does mutation fit in with natural selection?

Question 3: (2 points)

Define each of these terms:

Inbreeding:

Outbreeding:

Endogamy:

Exogamy:

Positive Assortative Mating:

Negative Assortative Mating:

Name:

Question 4: (2 points)

Consider the genotypic frequencies of these three hypothetical populations. Which is/are not in Hardy-Weinberg Equilibrium? How can you tell? Show your work.

- a. (0.25, 0.50, 0.25)
- b. (0.49, 0.42, 0.09)
- c. (0.36, 0.55, 0.09)

Question 6: (2 points)

Neurofibromatosis is a painful genetic disease characterized by tumors in nerve tissue. It affects 1 in 3000 individuals. The heterozygous genotype is often called a carrier. What is the carrier frequency of this condition? Show your work.

Question 7: (2 points)

Using the frequency of right over left interlocking fingers found in lab, use the Hardy-Weinberg Theorem to find the frequencies of the three possible genotypes and then say if the class population is in equilibrium or not. Show your work.

Extra credit (1 point): briefly describe one real life example of founder effect (do not use Tay Sachs disease or the O blood type in S America):