

## Evolution Chapter Questions

### Ch22 – Due \_\_\_\_\_

1. What is evolution?
2. What scientists helped shape Darwin's ideas and what did they study or main ideas they studied?
3. What is Lamarck's hypothesis of evolution?
4. What is an adaptation?
5. Explain descent with modification and natural selection.
6. What were Darwin's 4 observations of nature and the 2 inferences?
7. Define the following: homology, fossils, homologous structures, vestigial structures, convergent evolution, biogeography

### Ch23 – Due \_\_\_\_\_

1. What is microevolution?
2. Define the following: geographic variation, cline, and gene pool
3. What is Hardy-Weinberg equilibrium? List the equation and explain the parts.
4. What are the 5 conditions for Hardy-Weinberg equilibrium?
5. If a population is in equilibrium, what does that mean?
6. What is genetic drift? Explain the 2 types of genetic drift: founder effect and bottleneck effect
7. What is gene flow?
8. Describe the 3 types of modes of selection (the graphs).
9. What is sexual dimorphism and sexual selection?
10. Explain heterozygote advantage.
11. Why can't natural selection create perfect organisms?

### Ch24 – Due \_\_\_\_\_

1. What is the biological species concept? What is a species?
2. What is reproductive isolation?
3. Explain the difference between prezygotic and postzygotic barriers. List the types of each from p.490 (not the specific examples).
4. What is the difference between allopatric and sympatric speciation?
5. What is polyploidy?
6. Define punctuated equilibrium.

### Ch25 – Due \_\_\_\_\_

1. What is macroevolution?
2. What is the proposed hypothesis for the development of simple cells (p.508)?
3. What are protobionts and ribozymes? How do they relate to the development of life on Earth?
4. List the experiments that each of the following scientists work on: Oparin/Haldane, Miller/Urey, Cech
5. What eon, era, period, and/or epoch in the geologic time scale did the following take place: oldest fossil of eukaryotic cells, radiation of mammals, origin of primates, first land plants
6. How does continental drift relate of evolution of organisms?
7. What is adaptive radiation and homeotic genes?