

Name _____ Date _____ Period _____

BIOLOGY – STUDY GUIDE CHAPTERS 16 & 17

WARNING: THERE IS A ***LOT*** OF WRITING AND EXPLAINING ON THIS QUIZ.

1. What is a species?
2. Know what *fitness* is. Why is it so important?
3. Know how GENETICS and the ENVIRONMENT are important to evolution.
4. Know the 3 parts to Lamarck's theory. List and describe each part. Know examples of his theory. The parts will not be given to you; you will need to know them.
5. Be able to solve Hardy-Weinberg equilibrium problems. Review the notes, practice problems, and the list of "shortcuts".
6. List the 5 steps to Darwin's theory of natural selection. Explain each part.
7. Be able to discuss examples of evolution using the 5 steps. For example, know how to explain each of these:
 - Darwin's finches
 - drug resistant bacteria
 - giraffe height
 - rabbits and myxomatosis
 - peppered moth
8. Know the 3 types of evolution without natural selection: bottleneck effect, founder effect, and artificial selection
9. Know the 3 modes of natural selection: direction, stabilizing, and diversifying
10. Know the difference between a pre-zygotic barrier and a post-zygotic barrier.
11. Know the PRE-zygotic and POST-zygotic barriers to reproduction: habitat isolation, temporal isolation, behavioral isolation, mechanical isolation, gametic isolation, reduced hybrid viability, reduced hybrid fertility, hybrid breakdown
12. There will be some true/false questions about Darwin, mutations, how to read evolutionary trees, Hardy-Weinberg equilibrium, etc.