**Review for Evolution `Quest’**

1. Fossils- where you find them; which are older; radiometric dating; paleontologist
2. Oparin and Haldane/ Miller and Urey- what did the latter pair prove?
3. What is a reducing atmosphere and what would it have little (or none) of?
4. Spontaneous Generation vs. Biogenesis; Endosymbiotic Theory
5. Which era is the majority of earth’s history? What era are we in now?
6. Definitions, examples and application: Natural selection; adaptation; evolution; descent with modification; “fitness”
7. Darwin- significant contributions, observations, inferences
8. Lamarck’s “theory”
9. Examples of: natural selection; divergent evolution (homologous structures); convergent evolution (analogous structures);
10. Selection: Stabilizing, directional, disruptive/diversifying
11. What is the evidence for evolution?
12. What is the smallest unit that can evolve?
13. What is the only way to get a new allele?
14. Compare/contrast microevolution to macroevolution
15. What was the significance, as well as assumptions, of the Hardy Weinberg equation? Why does it not “apply” to living systems? (Know the reasons). \*Solve equations!
16. What are the causes of microevolution? Be able to apply examples
17. What is genetic drift due to? Is natural selection a factor? Give an example of a bottleneck and founder effect.
18. What is gene flow?
19. What is the only force that creates a new allele?
20. Does natural selection act on genotype? Why or why not?
21. What are consequences of nonrandom mating?
22. What is a morph? A cline? Give an exp of each
23. Explain why heterozygotes have an “advantage” over homozygotes.
24. Why can an endangered species “get their numbers back”, but still be vulnerable to extinction?
25. What are the 3 types of natural selection? Know examples and interpret graphs.
26. What is the final result of changes in gene pool alleles?
27. A new species cannot form unless there is?
28. Define species.
29. What are some prezygotic isolating mechanisms? Postzygotic? Know examples
30. What is the most common mode of speciation? Give an example
31. How did Darwin’s finches demonstrate adaptive radiation?
32. What is coevolution? Exp?
33. Compare/contrast (phyletic) gradualism vs. punctuated equilibrium
34. Be able to interpret a (simple) cladogram. What do they all have in common? This will also be on the next test.