Evolution Review Questions / Unfair Game

These questions have been designed from the specific questions that may appear on tomorrow’s test.

1. In Darwin’s view of evolution, this phenomenon is the driving force of evolution.

2. Cytochrome C is a protein found in almost all aerobic organisms. Why do the cytochrome C proteins from different species have many similarities?

3. What types of structures indicate an evolutionary relationship between two species?

4. According to the biological species concept, what defines a species?

5. What determines the evolutionary fitness of an organism?

6. How can it be determined if a speciation event has occurred?

7. How do allele frequencies change for a population that is in Hardy-Weinberg genetic equilibrium?

8. Which influences fitness, phenotype or genotype?

9. What is the biggest advantage of sexual reproduction over asexual reproduction?

10. What is a homologous structure?

11. “Age of Dinosaurs”

12. Current era of geological time

\*\*\* 13. What types of rocks may contain fossils?

14. What are the conditions required for genetic equilibrium?

\*\*\* 15. What is the name of the biologist who preceded Darwin and believed acquired traits were passed on to offspring?

16. Provide an example of disruptive (aka divergent) selection.

17. What causes the emergence of adaptations?

18. What is the founder effect?

19. What are the three characteristics of a trait required for natural selection to occur?

20. As the number of differences between two homologous protein sequences increases, what can be inferred about how closely they are related?

BCR topics

1. construct a cladogram using molecular homology data.
2. Describe the characteristics of a valid scientific hypothesis. (3)
3. Describe the process of speciation in terms of variation, selection, and adaptation.