**Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Hr.\_\_\_\_\_\_\_\_**

**Zoology Chapter 4 Study Guide:**

1. According to Charles Darwin, evolution is most closely related to which concept? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
2. The idea that the earth is shaped today by the forces of wind, rain, rivers, volcanoes, and geological uplift—just as it has been in the past—is known as: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
3. The idea that the earth is shaped today by the forces of wind, rain, rivers, volcanoes, and geological uplift—just as it has been in the past—was developed by \_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
4. List three key concept to the theory of evolution(Look in your notes):
   1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. The formation of new species from an ancestral species in response to the opening of new habitats is:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_.
6. The combination of Darwinian evolutionary theory and population genetics is referred to as the:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
7. The development of pesticide resistance in crop pests is an example of a. macroevolution b. Microevolution c Both
8. Structures and processes that are derived from a common ancestor are said to be \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
9. The study of fossils is called\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
10. The theory of uniformitarianism was important for Charles Darwin's ideas because it indicated that the earth was much older than 6,000 years and that the face of the earth changed gradually over its history. (True or False)
11. Ancestral finches encountered habitats in the Galapagos Islands that were devoid of other birds and predators. They rapidly multiplied and filled ecological roles that were unusual for finches on the mainland. This account is an example of adaptive radiation. (True or False)
12. Natural selection is a positive force that selects from individuals with adaptive traits, allowing them to reproduce. (True or False)
13. Evolutionary adaptations lead to perfection in a species. (True or False)
14. Variations on which natural selection acts arise as a result of random mutations. A new variation may, or may not, be adaptive. (True or False)
15. In a fossil bed, older fossils would be found above younger fossils. (True or False)
16. Natural selection involves detrimental traits being eliminated from a population by the failure of the organism containing them to reproduce. (True or False)
17. An adaptation present in an organism in one environment may be maladaptive in another environment. (True or False)
18. Over long periods of time, microevolutionary changes may result in macroevolution. (True or False)
19. New structures and processes are usually the result of evolutionary changes in existing structures and processes. (True or False)
20. The results of convergent evolution are correctly depicted in tree diagrams. (True or False)