AP: CHAPTER 22: DESCENT WITH MODIFICATION

1. Identify the three significant historical themes that set the stage for Darwinian evolutionary theory.

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2. What were the two major points made in *The Origin of Species*?

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3. What were the conventional paradigms in the 1800’s when Darwin developed his theories?

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4. What was the contribution of Carolus Linnaeus to the evolutionary theories?

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5. How did the study of fossils help Darwin shape his theories?

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6. How did geological gradualism and uniformitarianism influence Darwin?

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7. Identify the two principles of Lamarck’s theory of evolution.

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8. How did the observations during his voyage on the Beagle influence Darwin’s theories?

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9. Why were the Galápagos Islands so important to Darwin’s observations?

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10. What are the elements for the formation of new species?

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11. What is the driving force behind the evolution of the 14 species of finches on the Galapagos?

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12. What was Wallace’s role in the Theory of Natural Selection?

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13. What were the main points of *The Origin of Species*?

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15. How does the “tree analogy” represent the evolutionary relationships of creatures?

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16. Summarize the observations and inferences recognized as the backbone of evolution by natural selection.

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17. Observations:

a.  

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e.  

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18. Inferences:

a.  

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b.  

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c.  

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19. How did Darwin’s experience with artificial selection influence his theories of evolution?

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20. For each of the following, indicate how it is used as evidence of evolution by natural selection.

   a. Paleontology ____________________________

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   b. Biogeography __________________________

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   c. Resistance to insecticides

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   d. Drug Resistance __________________________

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   e. Homology ____________________________

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   f. Homologous structures __________________________

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   g. Vestigial organs __________________________

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   h. Embryology ____________________________

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   i. Biochemical similarity __________________________

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