**The Theory Of Evolution By Natural Selection** (p. 276 – 282)

**I. Darwin Proposed A Mechanism For Evolution**

 **1.** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **is the process by which modern organisms descended from**

 **ancient organisms.** (Not in the book.)

 **2. In 1859, who published an explanation for a mechanism driving the process of evolution?**

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 **3. In Darwin’s time, most people believed that a species is divinely created and unchanging.**

 Circle One : True False

 **4. Explain the hypothesis of evolution created by Jean Baptiste de Lamarck.**

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 **5. Circle the letter of the sentence that is false about Darwin’s voyage on the HMS *Beagle*.**

 a. Darwin made important observations on the Galapagos Islands, near South America.

 b. He reported his findings soon after he returned home.

 c. Darwin read Charles Lyell’s book, *Principles Of Geology.*

 d. Discovered fossils of extinct animals.

 **6. How did the economist, Thomas Malthus, influence Darwin?**

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 **7. Define the term population.**

 Population –

**II. Evolution By Natural Selection**

 **1. Define the term natural selection.**

 Natural Selection –

 **2. Define the term adaptation.**

 Adaptation –

 **3. List three critical adaptations that you possess as a human.**

 1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 **4. *On The Origin Of Species*, presented a view of evolution that was widely accepted.**

 Circle One : True False

 **5. List the four components of Darwin’s theory of evolution by natural selection.**

 1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 4. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**III. Darwin’s Ideas Updated** *(Questions 2 – 5 are not in the book.)*

 **1. How does natural selection affect allele frequencies in populations?**

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 **2. *What does the Hardy-Weinberg principle state?***

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 **3.** *\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_* ***occurs when allele frequencies are constant.***

 **4. *List five conditions required to maintain genetic equilibrium.***

 1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 4. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 5. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 **5. *Why is a large population size important for maintaining genetic equilibrium?***

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 **6. Define the term reproductive isolation.**

 Reproductive Isolation –

 **7. How has reproductive isolation affected squirrel populations near the Grand Canyon?**

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 **8. Differentiate between gradualism and punctuated equilibrium.**

 Gradualism : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Punctuated Equilibrium : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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