**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?**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**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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