

**CHAPTER 23 STUDY QUESTIONS: The Evolution of Populations**

- 1) Distinguish between **QUANTITATIVE** characters and **DISCRETE** characters (“either-or” traits). Give an example of each.
- 2) What is **MICROEVOLUTION**? What are the five causes of microevolution?
- 3) Describe the phenomenon known as the **BOTTLENECK EFFECT**, and give an example.
- 4) What is the **FOUNDER EFFECT**? How is this related to the relatively high frequency of some inherited genetic diseases among human populations?
- 5) Complete the following chart comparing different types of selection:

Type of selection	What is it? (Explain)	Example
Stabilizing selection		
Directional selection		
Diversifying selection		
Sexual selection		

- 6) What is meant by the statement: ***“Natural selection can only edit variations that already exist.”***
- 7) What is **geographic variation** and how does the term **CLINE** relate? Give an example of a cline.

(over)

8) Why is it said that evolution / natural selection acts on **phenotypes** and **not genotypes**?

9) Define and give an example of the following:

<b><i>Phenomenon:</i></b>	<b><i>Definition:</i></b>	<b><i>Example:</i></b>
<b>Heterozygote advantage:</b>		
<b>Frequency dependent selection:</b>		
<b>Neutral variation:</b>		
<b>Sexual dimorphism:</b>		
<b>Intrasexual selection:</b>		
<b>Intersexual selection:</b>		