2020 Spring Docent Training Class
Quiz Week 4 – February 23, 2020

Name: _____

Date: _____

1. What does ectothermic mean? How does this play a part in an amphibian or reptile's movement during the day?

2. Why are frogs considered indicator species?

3. What is the importance of metamorphosis in amphibians? How does it benefit their survival?

4. What is the importance of the evolution of the amniotic egg? How did this change benefit the survival of reptiles?

5. Describe the teeth of a reptile. How does this differ from the mammals?

Answers:

1. An ectothermic animal on external sources, such as sunlight or a heated rock surface to regulate their body temperature. Because ectotherms depend on environmental conditions for body temperature regulation, as a rule, they are more sluggish at night and in early mornings. To warm up, reptiles and many insects find sunny places and adopt positions that maximize their exposure; at harmfully high temperatures they seek shade or cooler water. In cold weather, honey bees huddle together to retain heat. Butterflies and moths may orient their wings to maximize exposure to solar radiation in order to build up heat before take-off.

2. An indicator species is an organism whose presence, absence or abundance reflects a specific environmental condition; indicator species can signal a change in the biological condition of a particular ecosystem, and thus may be used as a proxy to diagnose the health of an ecosystem. Because of their permeable skin, toxins can enter the skin forming defects and mutations such as multiple or deformed legs and even death.

3. Amphibians undergo a complete metamorphosis; they have two distinct life stages – a larval stage and adult stage. During metamorphosis, tadpoles lose their gills and develop lungs. Metamorphosis is important in amphibians because the adults fill a different niche then the larvae and so do not compete with them, giving them a better chance at life.

4. The significance of the evolution of the amniotic egg is that it afforded greater independence to land animals; eggs could survive out of the water, allowing amniotes to branch out into drier environments. The eggs could also "breathe" and cope with wastes, allowing the eggs and the amniotes themselves to evolve into larger forms and eliminates the need for a larval stage, allowing the young to mature further prior to hatching.

5. The teeth of most reptiles are usually long, conical and are more or less uniform in size and shape, showing little specialization; reptiles are **homodonts**. Most reptiles are carnivorous and they swallow the prey whole. They use teeth only to hold the prey. Mammals are heterodonts and have three types of teeth allowing them to specialize and become more efficient than other vertebrates.