**Chapter 4 Unit Exam**

**Matching:**

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| F 1. Ecosystem in which water either covers the soil or is present at or near the surface of the soil for part of the year. | A. Greenhouse Effect |
| C 2. The area in which an organism lives. | B. Tropical Zone |
| A 3. Natural situation in which heat is retained by a layer of gases. | C. Habitat |
| H 4. Located in a small area that differs from the climate around it. | D. Mutualism |
| D 5. When both species benefit from a symbiotic relationship | E. Biome |
| G 6. Type of wetland formed where rivers meet the sea | F. Wetland |
| B 7. Near the Equator, between 23.5 North and 23.5 South latitudes. | G. Estuary |
| E 8. A complex of terrestrial communities that covers a large area. It is characterized by certain soil and climate conditions. | H. Microclimate |

**Multiple Choice:** Choose the correct answer from the choices provided.

1. The average year-after year conditions of temperature and precipitation within a particular region are its
   1. Weather
   2. Climate
   3. Greenhouse effect
   4. Biotic factors
2. The greenhouse effect causes an increase in
   1. Carbon dioxide
   2. Temperature
   3. Oxygen
   4. Water
3. All the biotic and abiotic factors in a pond form a(an)
   1. Biosphere
   2. Ecosystem
   3. Community
   4. Niche
4. A relationship in which one organism is helped and another is neither helped nor hurt is called
   1. Mutualism
   2. Parasitism
   3. Commensalism
   4. Competition
5. A form of symbiosis in which one organism benefits and the other is harmed is called
   1. Mutualism
   2. Parasitism
   3. Commensalism
   4. Succession
6. In a tropical rain forest, the dense covering formed by the leafy tops of tall trees is called the
   1. Canopy
   2. Taiga
   3. Niche
   4. Understory
7. Organisms that live near or on the ocean floor are called
   1. Parasites
   2. Benthos
   3. Plankton
   4. Mangroves
8. Which is NOT an abiotic factor in an ecosystem?
   1. Microorganisms
   2. Light
   3. Temperature
   4. Rainfall
   5. pH
9. The water in an estuary is
   1. Salt water only
   2. Poor in nutrients
   3. Fresh water only
   4. In the aphotic zone
   5. A mixture of fresh water and salt water
10. In the diagram of the ocean below, the feature labeled A is the
    1. Open ocean
    2. Coastal ocean
    3. Trench
    4. Estuary

A

**TRUE OR FALSE**: ***Circle* either true or false for each question**

1. **True or False:** Plankton is a general term for the tiny, free-floating organisms that live in only salt water.
2. **True or False:** Physical, or nonliving, factors that shape ecosystems are called abiotic factors.

**SHORT ANSWER**

1. Why are plants generally few and far between in a desert?

Because to get a better chance of survival when the lack of resources such as nutrients and water is so low. They distance themselves apart, so they have more resources to themselves. The reason why there are so few is because, a little number of plants are adapted to this type of climate.

1. How are salt marshes and mangrove swamps alike? How are they different? Construct a Venn diagram for this question.

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| --- | --- | --- |
| **Salt Marsh** |  | **Mangrove** |
| * Dominated by salt tolerant grasses | **Alike** | * Dominated by salt resistant trees |
| * Form farther inland | * Both high in salt content | * Can be found in Hawaii |
| * Found all the way up in Maine | * Found on the eastern side of the USA | * Located closer to shores. Has a tide-line. |
|  | * Have salt resistant plants |  |
|  |  |  |

1. What is the difference between an organism’s habitat and its niche?

The community provides the habitat—the place where particular plants or animals live. Within the habitat, organisms occupy different niches.

A niche is the functional role of a species in a community—that is, its occupation, or how it earns its living. For example, the scarlet tanager lives in a deciduous forest habitat. Its niche, in part, is gleaning insects from the canopy foliage.

1. Consider these two biomes: (1) the temperate grassland and (2) the temperate woodland and shrubland. Animals such as coyotes are known to live in both biomes. Describe two adaptations that might enable an animal to tolerate these two different biomes. Discuss the coyote or an animal of your choice.

Coyotes are one the most adaptable animals. They live everywhere in Colorado from the dry shortgrass prairie and semidesert shrublands to all the way up in the high alpine life zone. Coyotes even have adapted to living in cities. One of the major reasons they can live in so many places is that they are not picky eaters. They will eat insects, rodents, rabbits, eggs, birds, lizards, snakes, frogs, toads, sick larger animals, carrion (dead animals), fruit, berries, and vegetables. They are about the size of medium-sized dog so they do not need as much food as the bigger wolves and mountain lions.

Coyotes are adaptable in other ways too. They can have grow a thick coat of fur to stay higher in the mountains or a thinner coat of hair to stay in the hot semidesert shrublands. They can be active in the night or during the day, but they prefer the early mornings and late evenings. Coyotes are very social animals and usually live and hunt in packs. Coyotes communicate with their eerie howl, yips, and growls.

1. Competition for resources in an area is usually more intense within a single species than between two different species. Can you explain this observation? (*Hint:* Consider how niches help organisms of different species avoid competition)

If there is only one species then each animal in this ecosystem is competing in the same niche, and competing for the exact same resources. However if there is more than one species then there is more than one niche to fill, thereby decreasing the competition for resources.