**Aquatic Ecosystems** (p. 181 – 191)

**I. Describing Aquatic Ecosystems**

 **1. Define the term salinity.**

 Salinity –

 **2. What are the typical salinity levels of the following :**

 1. Salt Water : \_\_\_\_\_\_\_\_\_\_\_\_ ppt

 2. Fresh Water : \_\_\_\_\_\_\_\_\_\_\_\_ ppt

 3. Brackish Water : \_\_\_\_\_\_\_\_\_\_\_\_ ppt

 **3. What happens to saltwater fish in freshwater and freshwater fish in salt water?**

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

 **4. Match each aquatic zone with the correct definition.**

 1. \_\_\_\_\_ Photic Zone A. Bottom of a body of water; Could be sunlit or dark

 2. \_\_\_\_\_ Aphotic Zone B. Zone with no sunlight or photosynthesis occurring

 3. \_\_\_\_\_ Benthic Zone C. Site of photosynthesis; Can extend down 200 meters

 **5. Most animals live in photic zones due to photosynthesis, dissolved oxygen, & warmth.**

 Circle One : True False

**II. Freshwater Ecosystems**

 **1.** **Determine whether the statement is true or false. If false, then correct the statement to**

 **make it true. (X = True; O = False)**

 1. \_\_\_\_\_ Ponds are smaller and lakes are larger.

 2. \_\_\_\_\_ The Great Lakes are an example of an inland sea, due to their large sizes.

 3. \_\_\_\_\_ All lakes and ponds are full of nutrients.

 4. \_\_\_\_\_ The littoral zone is shallow, near the shore, and possess rooted plants.

 5. \_\_\_\_\_ Very few invertebrates live in the limnetic zone, which is far from the shore.

 **2. Define the term wetlands.**

 Wetlands –

 **3. List 5 reasons why wetlands are important ecosystems.**

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

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

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

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

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

 **4.** **Determine whether the statement is true or false. If false, then correct the statement to**

 **make it true. (X = True; O = False)**

 1. \_\_\_\_\_ Freshwater marshes are mainly dominated by woody plants.

 2. \_\_\_\_\_ Freshwater swamps consist of grass-like plants only.

 3. \_\_\_\_\_ Bogs are characterized by floating mats of organic matter.

 4. \_\_\_\_\_ Primary succession is common among bogs.

 5. \_\_\_\_\_ Fens are similar to bogs, but possess a groundwater source of water.

 **5. Match each river term with the correct definition.**

 1. \_\_\_\_\_ Flood Plain A. All land area drained by a river and tributaries

 2. \_\_\_\_\_ Meander B. The result of the shifting of a river that cuts off water

 3. \_\_\_\_\_ Oxbow Lake C. A small river system flowing into a larger river

 4. \_\_\_\_\_ Source D. Area near a river that is low-lying & commonly flooded

 5. \_\_\_\_\_ Tributary E. Wide, curvy path of a mature river

 6. \_\_\_\_\_ Watershed F. Site of fast-moving, highly oxygenated river water

**III. Estuaries**

 **1. Define the term estuaries.**

 Estuaries –

 **2. Organisms living in estuaries tolerate a wide range of salinity & temperature conditions.**

 Circle One : True False

 **3. Estuaries trap very few nutrients and are considered to be relatively unproductive.**

 Circle One : True False

 **4. List 2 characteristics of a saltwater marsh & where one is located in the United States.**

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

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

 Location : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 **5. List 2 characteristics of a mangrove swamp & where one is located in the United States.**

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

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

 Location : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 **6. List two reasons why estuaries are important ecosystems.**

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

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

**IV. The Oceans**

 **1. List the five oceans of the world.**

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

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

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

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

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

 **2. What percentage of the Earth is covered by ocean water?** \_\_\_\_\_\_\_\_\_%

 **3. Warmer water sinks in oceans, whereas colder water rises.**

 Circle One : True False

 **4. Water with higher salinity sinks, whereas water with less salinity rises.**

 Circle One : True False

 **5. What major ocean current flows from the Gulf Of Mexico to the north Atlantic Ocean?**

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

 **6. Define the term upwelling.**

 Upwelling –

 **7. List the zones of the ocean (based on vertical and horizontal stratification).**

 **Vertical** **Horizontal**

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

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

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

 **8.** **Determine whether the statement is true or false. If false, then correct the statement to**

 **make it true. (X = True; O = False)**

 1. \_\_\_\_\_ Two high tides & two low tides occur each day in an intertidal zone.

 2. \_\_\_\_\_ Organisms do not have to deal with extreme conditions in intertidal zones.

 3. \_\_\_\_\_ Intertidal rocky shorelines possess organisms that attach themselves to rocks.

 4. \_\_\_\_\_ Intertidal sandy shorelines have more biodiversity than rocky shorelines.

 **9.** **Determine whether the statement is true or false. If false, then correct the statement to**

 **make it true. (X = True; O = False)**

 1. \_\_\_\_\_ Neritic zones extend from the low tide mark to the edge of the continental shelf.

 2. \_\_\_\_\_ The neritic zone is sunlit, because it only extends 66 meters downward.

 3. \_\_\_\_\_ Kelp forests in neritic zones supply shelter & food for other organisms.

 4. \_\_\_\_\_ Kelp forests are extremely productive due to kelp growing up to 200 meters tall.

 **10.** **Determine whether the statement is true or false. If false, then correct the statement to**

 **make it true. (X = True; O = False)**

 1. \_\_\_\_\_ Corals in coral reefs are composed of calcium carbonate.

 2. \_\_\_\_\_ Corals are evolutionarily unrelated to jellyfish and sea anemones.

 3. \_\_\_\_\_ Corals symbiotically exist with algae known as *zooxanthellae*.

 4. \_\_\_\_\_ Coral bleaching is caused by pollutants & decreased surface water temperatures.

 **11.** **Determine whether the statement is true or false. If false, then correct the statement to**

 **make it true. (X = True; O = False)**

 1. \_\_\_\_\_ The open ocean ecosystem is highly productive.

 2. \_\_\_\_\_ Phytoplankton & zooplankton are the base for open ocean food webs.

 3. \_\_\_\_\_ Bioluminescence is uncommon in the aphotic zone of the open ocean.

 4. \_\_\_\_\_ Photosynthesis does not occur in the open ocean benthic zone, so no life exists.

 5. \_\_\_\_\_ Life in the benthic zone of the open ocean revolves around hydrothermal vents.