**The Fish Body** (p. 746 – 757)

**I. Key Characteristics Of Modern Fishes**

 **1. List three characteristics shared by all fish species.**

 1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**II. Gills**

 **1. The main respiratory organ of a fish is the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.**

 **2. Differentiate between gill filaments and gill slits.**

 Gill Filaments : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Gill Slits : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 **3. Define the term countercurrent flow.**

 Countercurrent Flow –

**III. Circulation Of Blood**

 **1. What type of heart does a fish possess? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_-\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_**

 **2. Match each heart term with the correct definitions.**

 1. \_\_\_\_\_\_\_\_ Sinus Venosus A. Large chamber with thin, muscular walls.

 2. \_\_\_\_\_\_\_\_ Atrium B. Thick-walled pump; sends blood to rest of body.

 3. \_\_\_\_\_\_\_\_ Ventricle C. Pump that smoothes pulsations & adds force.

 4. \_\_\_\_\_\_\_\_ Conus Arteriosus D. Collection chamber; reduces blood flow to heart.

 **3. What type of circulation do fishes have?**

 Circle One : Double-Loop Circulation Single-Loop Circulation

**IV. Kidneys**

 **1. What is a key evolutionary challenge facing all vertebrates?**

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

 **2. What does each type of fish need to do maintain a proper salt (ion) and water balance?**

 Saltwater Fish : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Freshwater Fish : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 **3. What two organs play a major role in maintaining a salt / water balance.**

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

 **4. Define the term nephrons.**

 Nephrons -

**V. Reproduction**

 **1. Where does reproduction generally occur in fish species?**

 Circle One : External Fertilization Internal Fertilization

 **2. Describe the process of spawning.**

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

**VI. Today’s Fishes** *(p. 751 – 757)*

 **1. Complete the compare-and-contrast table of groups of fishes.**

|  |  |  |
| --- | --- | --- |
|  **Type** |  **Description** |  **Examples** |
|  Jawless Fishes (Class Agnatha) |  Scaleless, eel-like bodies; Multiple gill slits; Unpaired fins; Keep  notochord as adults |  |
|  Cartilaginous Fishes(Class \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_) |  |  Sharks, Rays, Skates, Sawfish, Chimaeras |
|  \_\_\_\_\_\_\_\_\_\_\_Fishes (Class Osteichthyes) |  |  Ray-finned fishes (flounder,  angelfish); Flying fish; Lobe-finned fishes (lungfish, coelacanth) |

 **2. Match each term with the correct definitions.**

 1. \_\_\_\_\_\_\_\_ Lateral Line A. Gas sac that regulates buoyancy.

 2. \_\_\_\_\_\_\_\_ Operculum B. Sensory system; extends along sides of bony fish.

 3. \_\_\_\_\_\_\_\_ Swim Bladder C. Fish with mobile fins, thin scales, & symmetrical tails.

 4. \_\_\_\_\_\_\_\_ Teleosts D. Hard plate; covers the gills on sides of the head.

 **3. Match each type of fish with the correct characteristics.**

 1. \_\_\_\_\_\_\_\_ Hagfishes A. Parasite; uses suction-cup structures to attach to hosts.

 2. \_\_\_\_\_\_\_\_ Lampreys B. Flat, kite-shaped fish with venomous barbs.

 3. \_\_\_\_\_\_\_\_ Sharks C. Bony, marine, lobe-finned fish.

 4. \_\_\_\_\_\_\_\_ Rays D. Bony, freshwater, ray-finned fish.

 5. \_\_\_\_\_\_\_\_ Skates E. Scavengers of dead animals on the ocean floor.

 6. \_\_\_\_\_\_\_\_ Yellow Perch F. Smaller, flat, triangular-shaped fish without barbs.

 7. \_\_\_\_\_\_\_\_ Coelacanth G. Possesses 6 to 10 rows of razor-sharp teeth.

 **4. About 95% of all living fish species are teleosts.**

 Circle One : True False