**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