**Invertebrate Chordates** (p. 700 – 702)

**I. The Chordate Skeleton**

 **1. Define the term chordates.**

 Chordates –

 **2. The chordate endoskeleton is completely internal.**

 Circle One : True False

 **3. List the four key characteristics of a chordate.** *(These are anatomical features.)*

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

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

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

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

 **4. Match each chordate anatomical term with the correct definitions.**

 1. \_\_\_\_\_\_\_\_ Notochord A. Paired structures in the throat region.

 2. \_\_\_\_\_\_\_\_ Dorsal Nerve Cord B. Long supporting rod located below nerve cord.

 3. \_\_\_\_\_\_\_\_ Pharyngeal Pouches C. Contains bone and muscle.

 4. \_\_\_\_\_\_\_\_ Postanal Tail D. Hollow; Connects nerves to organs & muscles.

 **5. What do pharyngeal pouches develop into for the following chordates?**

 Aquatic Chordates : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Terrestrial Chordates : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 **6. What chordate structure becomes the spinal cord in vertebrates?**

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

 **7. All chordates have a notochord, nerve cord, pharyngeal pouches, and a tail at some time**

 **in their life.**

 Circle One : True False

**II. Invertebrate Chordates**

 **1. Identify the three subphyla of the phylum Chordata.**

 1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ - tunicates

 2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ - lancelets

 3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ - fishes, amphibians, reptiles, birds, mammals

 **2. Define the term invertebrate chordates.**

 Invertebrate Chordates –

**III. Tunicates**

 **1. Identify differences between larval and adult tunicates.**

 Larvae *(Circle all that apply.)*

 Locomotion : Free-swimming Sessile

 Chordate Parts : Notochord Dorsal Nerve Cord

 Pharyngeal Pouches Postanal Tail

 Adult *(Circle all that apply.)*

 Locomotion : Free-swimming Sessile

 Chordate Parts : Notochord Dorsal Nerve Cord

 Pharyngeal Pouches Postanal Tail

 **2. Both larval and adult tunicates are filter feeders.** *(Not in the book.)*

 Circle One : True False

 **3. Describe the type of reproduction exhibited by tunicates.**

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

**IV. Lancelets**

 **1. Lancelets are a primitive form of fish.**

 Circle One : True False

 **2. Circle the letter of the sentence that is false concerning lancelets.**

 a. Lancelets are scaleless chordates only a few centimeters long.

 b. Muscles of lancelets are segmented, repeated V-shaped bundles.

 c. Lancelets live in deep ocean water.

 d. Lancelets bury most of their bodies in sediment as they filter protists out of water.