

Invertebrate Chordates (p. 700 – 702)

I. The Chordate Skeleton

1. Define the term chordates.

Chordates – deuterostome possessing a notochord, hollow dorsal nerve cord, pharyngeal pouches, + a postanal tail at some point in their life

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. Notochord
2. Hollow, Dorsal Nerve Cord
3. Pharyngeal Pouches
4. Tail that extends beyond the anus

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

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|---------------------------------|--|
| 1. <u>B.</u> Notochord | A. Paired structures in the throat region. |
| 2. <u>D.</u> Dorsal Nerve Cord | B. Long supporting rod located below nerve cord. |
| 3. <u>A.</u> Pharyngeal Pouches | C. Contains bone and muscle. |
| 4. <u>C.</u> Postanal Tail | D. Hollow; Connects nerves to organs & muscles. |

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

Aquatic Chordates : Wall of pharynx / Gill Structures

Terrestrial Chordates : Parathyroid Gland / Inner Ear

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

Hollow Nerve Cord

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. Urochordata - tunicates
2. Cephalochordata - lancelets
3. Vertebrata - fishes, amphibians, reptiles, birds, mammals

2. Define the term invertebrate chordates.

Invertebrate Chordates - two subphyla of chordates that do not have backbones

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.

- Hermaphroditic (Capable of asexual budding)

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

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Tunic
- tough sac surrounding adult body

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