**CHAPTER 34 – VERTEBRATE EVOLUTION & DIVERSITY**

1. What are the four derived characteristics of the Chordates? Provide a brief description of the function of each.
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3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
6. List and describe an example of an invertebrate chordate.

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1. Craniates are chordates that have a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. Vertebrates are craniates that have a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. Gnathostomes are vertebrates that have \_\_\_\_\_\_\_\_\_\_\_\_\_. Tetrapods are gnathostomes that have \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. Amniotes are tetrapods that have a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. Mammals are amniotes that have \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and produce \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. Humans are mammals that have a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
2. Describe a feature unique to the craniates. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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1. List and describe an example of a craniate. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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1. The evolution of vertebrates resulted in additional genetic complexity. Why?

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1. Define the following. Circle the one that is exhibited by humans.
   1. Ovoviviparous- \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   2. Viviparous- \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. What is the function of a swim bladder?

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1. List and describe the four specialized membranes of the amniotic egg. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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| **CLASS** | **CHARACTERISTICS** | | **EXAMPLES** |
| **Chondrichthes** |  | |  |
| **Osteichthyes** |  | |  |
| **Amniotes** |  | |  |
| **Reptilia** |  | |  |
| **Mammalia** | **Monotremes** |  |  |
| **Marsupials** |  |  |
| **Eutherians** |  |  |