**CHAPTER 33 – INVERTEBRATES**

1. How does the structure of a sponge affect its mechanism of nutrition?

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1. How do sponges reproduce? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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1. What is a unique characteristic of a Cnidarian gastrovascular cavity?

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1. Describe the two variations of the Cnidarian body plan? Provide examples of each.
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   2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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1. Name and describe the two types of cells that aid the Cnidaria in defense and obtaining food.
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   2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Describe the process of gas exchange in a flatworm.

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1. What is an alimentary canal? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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1. Describe the process of parthenogenesis. Name an organism that participates in this form of reproduction. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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1. What is a lophophore? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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1. Compare the coeloms of flatworms, rotifers, and lophophorates.

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1. What are the three major body regions of a mollusk?

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1. Define torsion. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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1. Why are Arthropoda regarded as the most successful of all animal phyla?

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1. Identify a characteristic that was most significant to Arthropoda success?

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| **Phylum** | **Class** | **Characteristics** | **Examples** |
| Cnidaria | Hydrozoa |  |  |
| Scyphozoa |  |  |
| Cubozoa |  |  |
| Anthozoa |  |  |
| Platyhelminthes | Turbellaria |  |  |
| Monogenea |  |  |
| Trematoda |  |  |
| Cestoda |  |  |
| Rotifera |  |  |  |
| Ectoprocta |  |  |  |
| Brachiopoda |  |  |  |
| Mollusca | Polyplacophora |  |  |
| Gastropoda |  |  |
| Bivalvia |  |  |
| Cephalopoda |  |  |
| Annelida | Oligochaeta |  |  |
| Polychaeta |  |  |
| Hirudinea |  |  |
| Nematoda |  |  |  |
| Arthropoda | Cheliceriformes |  |  |
| Myriapoda |  |  |
| Hexapoda |  |  |
| Crustacea |  |  |
| Echninodermata | Asteroidea |  |  |
| Ophiuroidea |  |  |
| Echinoidea |  |  |
| Crinoidea |  |  |
| Holothuroidea |  |  |
| Concentricycloidea |  |  |
| Chordata |  |  |  |