

**International College
Middle School**

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**Life Science Test
Arthropods & Echinoderms**

Name: _____

Class & Section: 2nd _____

March, 2006

Duration: one period

Special Remarks:

Neatness: (2%)

I. Circle the letter that best answers the questions. (12%)

Estimated Grade: _____/100

➤ The appendages of arthropods are

- a. found only on the head.
- b. hard and immovable.

- c. jointed and extend from the body .
- d. divided into six branches.

➤ An arthropod is vulnerable to predators during the molting period because

- a. it must come out of hiding to molt.
- b. its new exoskeleton is soft.
- c. molting cannot occur without the assistance of predators.
- d. predators are more numerous during this period.

➤ The function of mandibles is to

- a. bite and grind food.
- b. sense the environment.

- c. propel an arthropod when it swims.
- d. support an arthropod when it walks.

➤ Spiders feed by

- a. swallowing their prey whole.
- b. biting off and swallowing pieces of their prey.
- c. sucking up prey tissues that have been liquefied by enzymes.
- d. sipping nectar through a tube like mouthpart.

➤ The water vascular system of echinoderms is involved with each of the following body functions EXCEPT

- a. respiration.
- b. circulation.
- c. movement.
- d. reproduction.

➤ The mouthpart of a spider that contains a fang to stab a prey is called a

- a. spinneret.
- b. pedipalp.
- c. chelicera.
- d. thorax.

II. Complete each statement on the line provided. (12%)

1. If an arthropod has two pairs of antennae and two body sections, it is classified in the group called

_____.

2. A group of closely related animals of the same species that work together for the benefit of the whole group is called a (an) _____.

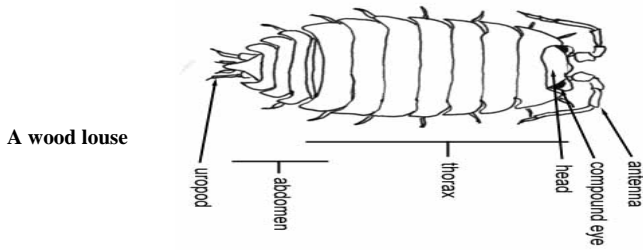
3. On an echinoderm, a (an) _____ is a structure that functions much like a living suction cup.

4. Shedding of the exoskeleton is called _____.

5. Ants, bees, and termites are examples of _____.

6. _____ is an echinoderm that feeds on algae.

III.. Study the following diagrams then answer the questions below.



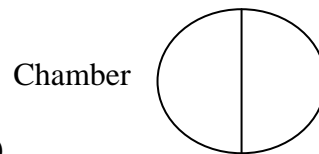
a. Label the above diagrams. (7%)

b. To which kingdom do these organisms belong? (2%)

c. To what phylum do the above organisms belong? Justify by giving three reasons. (4%)

d. Contrast the physical features of a wood louse to that of a spider. Give four differences. (8%)

Rana once found out some wood lice in her garden. She did not know how to get rid of them so she decided to do some tests. She used a circular chamber that had equal parts of bright and dim light. After making sure that both temperature and dampness on the entire chamber is the same, she put some wood lice in the middle of the chamber. They started to walk about.

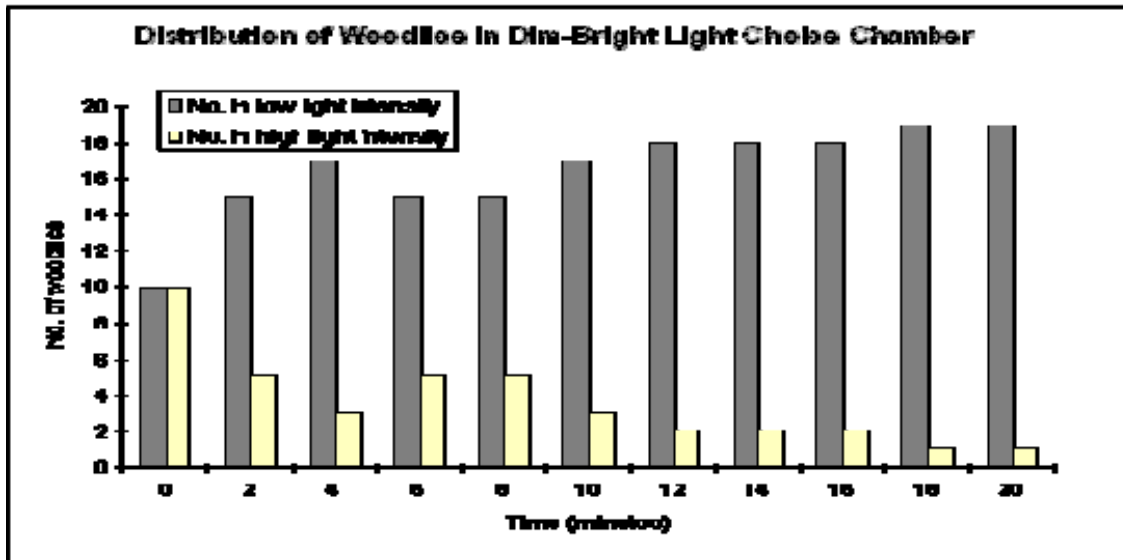


e. What is the variable in Rana's experiment? The constants? (4%)

f. What can be a hypothesis to Rana's experiment? (3%)

g. If the wood lice didn't mind the conditions they lived in, where would you expect Rana to find the wood lice after 5 minutes? (3%)

Rana did the experiment and drew the graph below. Use the graph to answer the questions below:



h. How many woodlice did Rana use in her experiment? (2%)

i. After four minutes, how were the woodlice distributed in the chamber? (3%)

j. After twenty minutes, how were the woodlice distributed in the chamber? (4%)

k. What can be a conclusion to Rana's experiment? (3%)

IV. In complete sentences, write the answers to the questions on the lines provided.

a. Contrast the skeleton of the arthropod to that of an echinoderm. Give two differences (4%)

b. What would happen to an arthropod if it were unable to molt? Justify. (4%)

c. What will happen if a sea star is cut into pieces? (4%)

d. Why would venom-producing glands be useless to many millipedes? (3%)

V. Use the diagram to answer each question.

1. Name the animal in the diagram. In what kind of environment does it live? (3%)

2. To what phylum does the animal in the diagram belong? Justify by giving two unique characteristics. (5%)

3. Identify the structures labeled A and describe their function. (4%)

4. Identify structure B. What substance is found in this structure, and how does that substance enter the animal's body? (4%)

5. Identify structure C and explain how it is used during feeding. (4%)

Good Luck

