Biology I - diy NOTES
Chpt 28.1 and 28.2
Arthropods

Name _____
Date _____ Hour _____

Read chapter 28.1 and 28.2 in your text, pages 741-755. Fill in the blanks (or answer the questions) below using the information you have read.

1. General characteristics of arthropods:
   - A typical arthropods is a _____ , _____,
     _____ animal.
   - _____ symmetry
   - has _____ structures called _____ .

2. Define appendage. What are they used for?

3. What are 3 advantages to having **jointed** appendages?

<u>Body Structure (Skeletal-Muscular system)</u>:

4. Arthropods have an _____-skeleton. It is a _____ , _____,
   _____ , made of _____ and _____ .
5. The exoskeleton _____ and _____ internal tissues
   and provides places for _____ of _____ .
   In species that live on land, the exoskeleton amy also provide protection
   against _____ .

6. What are 2 major disadvantages of having an exoskeleton? How have arthropods overcome this disadvantages?

7. Most arthropods are _____ , but do not have as many as worms.
8. In most arthropods, the segments have become _____ into 3 body sections: the _____ , the _____ , and the _____ .

<u>Respiratory System</u>:

9. Why do arthropods need well a developed respiratory system?

10. Three types of respiratory structures:
    1.) Aquatic arthropods exchange gases through _____ , which extract oxygen from, and release carbon dioxide into the _____ .
    2.) Most insects have special structures called _____ that are hollow tubes that carry air throughout the body. Air is pumped when the _____ move.
    3.) Most spiders have specilized structures called _____ which are folded membranes stacked like the pages in a book.

<u>Sensory / Nervous system</u>:

11. Movement, sound, and chemicals can be detected by _____ .
    They are also used for sound and odor _____ among animals.
12. Accurate _____ is also important to arthropods. Most arthropods have _____ of large _____ eyes and ____ to ____ _____ eyes.
13. What is the difference between a simple eye and a compound eye?

14. The nervous system of an arthropod consists of:
    - a double ventral _____ ,
    - an anterior _____ ,
    - and several _____ that act as _____ centers for the _____ in which they are located.

Circulatory System:

15. Arthropod blood is pumped by a _____ .
    They have a _____ circulatory system.
16. How does an open circulatory system work?

Digestive system:

17. Arthropods have a _____ digestive system with a _____, _____ , _____ , and _____ , together with other glands.
18. The mouth of most arthropods include one pair of _____ called _____ . They are adapted for holding, _____ , _____ , or _____ depending on the food source.

Excretory System:

19. Most terrestrial arthropods excrete wastes through _____ located in the _____ , they are attached to and empty into the _____ .

Reproduction:

20. Most arthropods have _____ and reproduce _____ .
21. Define parthenogenesis.

Types of Arthropods: (use the red categories in chapter 28.2)

1. _____
   - examples: _____
   - have _____ of jointed appendages, of these _____ are legs.
2. _____
   - examples: _____
   - live in _____ or damp places.
3. _____ and _____
   - what do they eat?

4. _____
   - are considered to be _____ because:

5. _____
   - examples: _____
   - the _____ group of arthropods.
   - have _____ body segments and ____ legs.

22. Define metamorphosis.

23. What is an advantage to undergoing complete metamorphosis?

24. What is the difference between complete and incomplete metamorphosis?

25. What characteristics and adaptations have allowed arthropods to survive and be so successful in so many habitats?

26. Arthropods most likely evolved from an ancestor of _____ which are _____ .