

## Bio-10-Q3W3--Arthropods-H.W.

### Multiple Choice

Identify the choice that best completes the statement or answers the question.

- \_\_\_\_ 1. An animal that is not a member of the class Arachnida is
- a. a deer tick.
  - b. a spider.
  - c. a dust mite.
  - d. a walking stick.

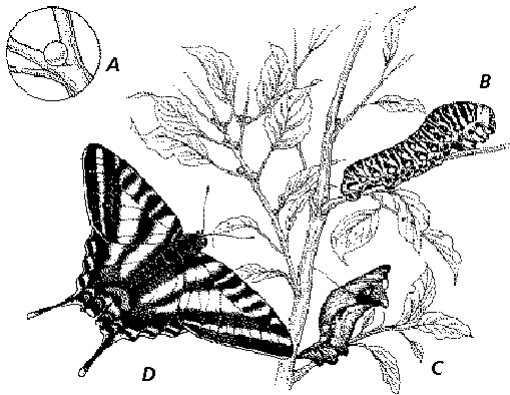
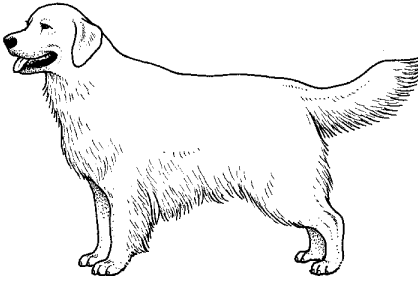


Figure 28-6

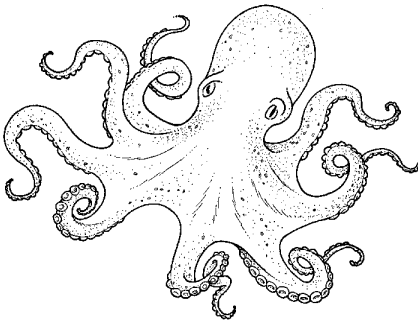
- \_\_\_\_ 2. What type of metamorphosis is shown in Figure 28-6?
- a. incomplete
  - b. complete
  - c. nymph
  - d. partial
- \_\_\_\_ 3. What stage of metamorphosis shown in Figure 28-6 has characteristics of chilopoda and diplopoda?
- a. C
  - b. D
  - c. A
  - d. B
- \_\_\_\_ 4. What stages of metamorphosis shown in Figure 28-6 have no exoskeleton?
- a. A and C
  - b. B and C
  - c. A and B
  - d. C and D
- \_\_\_\_ 5. What stage of metamorphosis shown in Figure 28-6 contains the youngest organism?
- a. A
  - b. C
  - c. B
  - d. D
- \_\_\_\_ 6. What stage of metamorphosis shown in Figure 28-6 does the most eating take place?
- a. B
  - b. A
  - c. C
  - d. D
- \_\_\_\_ 7. In what stage of metamorphosis shown in Figure 28-6 does the organism have recognizable insect characteristics like three segments and jointed appendages?
- a. C
  - b. B
  - c. A
  - d. D
- \_\_\_\_ 8. Grasshoppers have \_\_\_\_.
- a. two compound eyes and two simple eyes
  - b. three compound eyes and two simple eyes
  - c. two compound eyes and three simple eyes
  - d. none of these

\_\_\_ 9. What clue tells you immediately that the organism shown in Figure 28-2 is not an arthropod?



**Figure 28-2**

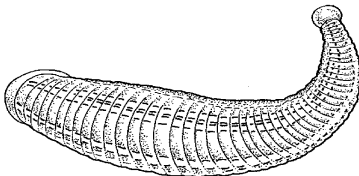
- a. it is warm blooded
  - b. it has no exoskeleton
  - c. it has no jointed appendages
  - d. it has no open circulation system
- \_\_\_ 10. The fact that horseshoe crabs have remained relatively unchanged for 500 million years indicates that
- a. they have very little genetic diversity.
  - b. natural selection has not taken place.
  - c. they must reproduce by parthenogenesis.
  - d. their environment has changed very little.
- \_\_\_ 11. In spiders, chelicerae are highly modified appendages that are adapted for
- a. holding food and injecting poison.
  - b. spinning silk and weaving webs.
  - c. chewing food.
  - d. mating and reproduction.
- \_\_\_ 12. In ticks and mites, the head, thorax, and abdomen
- a. are fused into one section.
  - b. are all the same size.
  - c. are absent.
  - d. are well-defined.
- \_\_\_ 13. In spiders, the exchange of gases takes place in \_\_\_\_.
- a. spiracles
  - b. gills
  - c. lungs
  - d. book lungs
- \_\_\_ 14. The stages of incomplete metamorphosis are \_\_\_\_.
- a. egg, nymph, adult
  - b. egg, larva, pupa, adult
  - c. larva, pupa, adult
  - d. egg, larva, adult
- \_\_\_ 15. What clue tells you immediately that the organism shown in Figure 28-3 is not an arthropod?



**Figure 28-3**

- a. it has more than 6 legs
  - b. it has no jointed appendages
  - c. it doesn't molt
  - d. it cannot fly
- \_\_\_ 16. The characteristic that most distinguishes arthropods from other invertebrates is \_\_\_\_.
- a. the endoskeleton
  - b. the coelom
  - c. bilateral symmetry
  - d. jointed appendages

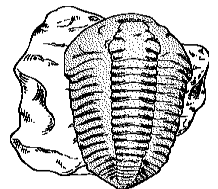
- \_\_\_\_ 17. Aquatic arthropods exchange gases through \_\_\_\_.
- their exoskeleton
  - book lungs
  - gills
  - tracheal tubes
- \_\_\_\_ 18. When a spider bites, it uses its \_\_\_\_.
- silk glands
  - chelicerae
  - pedipalps
  - mandibles
- \_\_\_\_ 19. The typical tick body consists of \_\_\_\_ segment(s).
- four
  - one
  - three
  - two
- \_\_\_\_ 20. Before an arthropod molts, a new exoskeleton \_\_\_\_.
- grows on top of its old one
  - cannot grow
  - must be found
  - grows beneath its old one
- \_\_\_\_ 21. How many pairs of jointed appendages do arachnids have?
- three
  - two
  - four
  - six
- \_\_\_\_ 22. The appendages of a spider that function as sense organs are
- its spinnerets.
  - its legs.
  - its pedipalps.
  - its chelicerae.
- \_\_\_\_ 23. Most insects have one pair of \_\_\_\_ that are used to sense vibrations, food, and pheromones in the environment.
- wings
  - antennae
  - eyes
  - pedipalps
- \_\_\_\_ 24. Crabs, lobsters, shrimps, and pill bugs are members of the class \_\_\_\_.
- Arachnida
  - Chilopoda
  - Insecta
  - Crustacea
- \_\_\_\_ 25. What clue tells you immediately that the organism shown in Figure 28-4 is not an arthropod?



**Figure 28-4**

- it has no jointed appendages
  - there are too many segments
  - its gas exchange is inefficient
  - it has no endoskeleton
- \_\_\_\_ 26. After catching their prey and injecting it with poison, spiders
- chew the prey into small pieces.
  - lay their eggs in the prey.
  - eat the prey whole.
  - suck up the prey's contents, which have been liquified with enzymes.
- \_\_\_\_ 27. No one has ever seen a living trilobite. From this fossil picture in Figure 28-5, how can you tell it was an arthropod?

- it produced asexually
- it had segments
- it had Malpighian tubules
- it molted



**Figure 28-5**

## Matching

*Match each item with the correct statement below.*

- |                      |                    |
|----------------------|--------------------|
| a. mandible          | g. parthenogenesis |
| b. appendage         | h. spiracles       |
| c. spinneret         | i. book lung       |
| d. pheromone         | j. cephalothorax   |
| e. tracheal tubes    | k. molting         |
| f. Malpighian tubule |                    |

- \_\_\_ 28. jaw of an arthropod
- \_\_\_ 29. shedding of the old exoskeleton
- \_\_\_ 30. excretory organ of terrestrial arthropods
- \_\_\_ 31. branching networks of hollow passages that carry air throughout the body
- \_\_\_ 32. chamber that contains leaflike plates that serve for gas exchange
- \_\_\_ 33. form of asexual reproduction in which an organism develops from an unfertilized egg
- \_\_\_ 34. chemical odor signal given off by an animal
- \_\_\_ 35. openings through which air enters and leaves the tracheal tubes
- \_\_\_ 36. movable structure used by a spider to turn silk into thread
- \_\_\_ 37. fused head and thorax region in some arthropods
- \_\_\_ 38. any structure, such as a leg, that grows out of the body of an animal

## True/False

*Indicate whether the statement is true or false.*

- \_\_\_ 39. In arthropods, appendages are adapted for a variety of purposes including sensing, walking, feeding, and mating.
- \_\_\_ 40. The well-developed arthropod nervous system consists of a double ventral nerve cord, an anterior brain, and several ganglia.
- \_\_\_ 41. You might be more likely to see pill bugs moving around out in the open on a rainy day than on a sunny one.
- \_\_\_ 42. The exoskeleton of arthropods is harder and provides more protection than the cuticle of annelids.
- \_\_\_ 43. The acute senses of arthropods are the result of organs such as compound eyes and antennae.
- \_\_\_ 44. The legs of most crustaceans are unspecialized and used only for walking.
- \_\_\_ 45. Jointed appendages are advantageous because they are limited in their strength and functions.
- \_\_\_ 46. Having compound eyes on movable stalks is an advantage for aquatic crustaceans whose potential predators could attack from almost any direction.
- \_\_\_ 47. The exoskeleton is a protective adaptation that enables arthropods to move freely.
- \_\_\_ 48. Efficient gas exchange in arthropods is accomplished by tracheal tubes, book lungs, or gills.
- \_\_\_ 49. Arthropods have a well-developed excretory system consisting of nephridia.
- \_\_\_ 50. Both centipedes and millipedes have book lungs for gas exchange.

=====