

Name: KEY

## Zoology Test #5 STUDY GUIDE: Arthropods and Early Chordates

1. What are the three body segments of an arthropod? Head, thorax, abdomen

2. What is a cephalothorax? What organisms have one?

A fused head & thorax      Spiders

3. What is the role of the exoskeleton? What is the exoskeleton made of?

Support & protection      Chitin

4. Ecdysis is the periodic shedding of the exoskeleton and is necessary as the arthropod grows.

5. Why are arthropods particularly vulnerable after molting?

Because the new exoskeleton is still soft

6. What type of circulatory system do arthropods have? open

7. What type of eyes do arthropods have? compound

8. Spinnerets produces the webs in a spider

9. What are the three different types of appendages in spiders?

① Chelicerae - Claws / fangs - 1 pair

② Pedipalps - Feeding / sensing - 1 pair

③ Walking Legs - movement - 4 pairs

10. Crustaceans have mouths composed of a pair of mandibles used for chewing and tearing.

11. Decapods such as lobsters have how many appendages? 10

12. Explain the difference between a millipede and a centipede.

Millipede: round body, 2 pairs of legs per segment

Centipede: Flat body, 1 pair of legs per segment, can be venomous

13. The organisms in the class insecta have all of their appendages attached to which part of the body?

Thorax

14. List the stages of complete metamorphosis in order:

Larva → Pupa → Adult

15. List the stages of incomplete metamorphosis in order:

Egg → Nymph → Adult

16. Explain the social structure of bees:

Queen - lay eggs  
Drones - males that fertilize eggs  
Workers - all infertile females

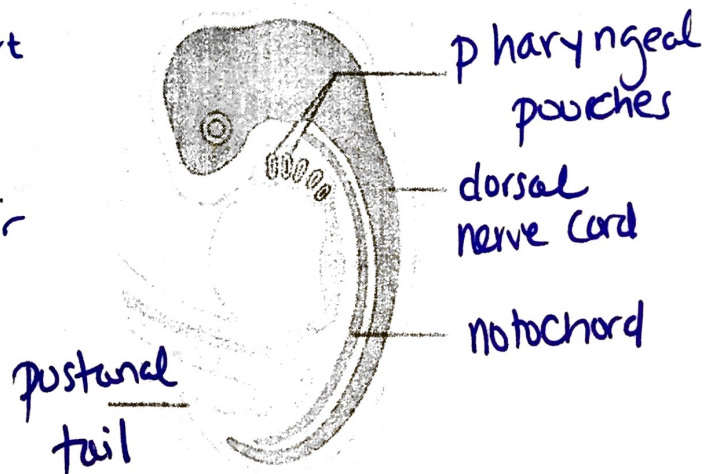
17. Provide the subphylum for the following species:

Spiders	<u>Chelicerate</u>	Millipedes	<u>Uniramia</u>
Centipede	<u>Uniramia</u>	Lobster	<u>Crustacea</u>
Butterfly	<u>Uniramia</u>	Horseshoe Crabs	<u>Chelicerate</u>
Roly-Polys	<u>Crustacea</u>	Ladybug	<u>Uniramia</u>
Ants	<u>Uniramia</u>	Ticks	<u>Chelicerate</u>

18. What type of symmetry do chordates have? Bilateral

19. Explain the role of each of the following:

- a. Dorsal Nerve Cord - Responsible for senses, perception, motor response  
- Expands anteriorly as the brain
- b. Pharyngeal pouches  
- Openings between digestive tract & outside
- c. Notochord - used for support
- d. postanal tail  
A tail that is supported by notochord or vertebral column



20. Label this diagram:

embryonic chordate

21. Sea squirts subphylum: Urochordata

22. Lancelets subphylum: Cephalochordata