

Zoology Test #4 Study Guide: Echinoderms and Mollusks

Name: Key

1. List the organisms found in the Mollusca phylum: snails, slugs, clams, squid
octopus, nautilus
2. What are the four main parts of a mollusk
mantle, shell, visceral mass, foot
3. How is the shell of a mollusk produced?
Made by glands in the mantle that secrete calcium carbonate
4. Define: radula, siphon, operculum, chromatophores, Pen
radula: a rough tongue-like organ w/ teeth like structures
5. List the class that the organism is a part of

Snails gastropoda Squid Cephalopoda Slug gastropoda
Nautilus Cephalopoda Chiton polyplacophore Clam bivalvia

6. Describe a chiton marine, have a reduced head + flattened foot
shell is divided into 8 articulating dorsal valves
7. Which organisms have beaks in the Mollusca phylum? Cephalopods
Octopus, squids
8. What color is squid and octopus blood? blue
9. How many appendages (arms, tentacles, etc.) do the following have:
 - a. octopus - 8
 - b. squid - 10
 - c. nautilus over 90
10. Describe the water vascular system.
Series of water filled canals that transport oxygen, food + waste
11. Do echinoderms have a true centralized brain? What do they have instead?
No - they have a nerve plexus
12. What role do ossicles play in an echinoderm?
They are the skeleton
13. What are tube feet?
Act like suction cups. They help the starfish walk + capture prey
14. State the class the organism is in:
Sea Cucumber Holothuroidea Sand Dollar Echinozoidea
Sea Urchin Echinozoidea Starfish Asterozoidea
15. Explain how a starfish digests food
Extend one stomach out to break down the food then pull in the food where the other stomach digests it.
16. What do sea stars eat?
bivalvias like mussels

17. The chewing organ of a sea urchin is called Aristotle's lantern
18. What do sea cucumbers eat?
remains of other organisms that are in sand
19. Sea cucumbers extract oxygen from water using a pair of respiratory trees that branch off the cloaca.
20. Describes a sea cucumbers response when threatened:
they spill their guts so a predator will eat those instead
21. Label the squid and starfish

