

M O D E R N E A R T H S C I E N C E

Chapter 21

Ocean Water

Read each statement below. If the statement is true, write *T* in the space provided. If the statement is false, write *F* in the space provided.

- _____ 1. Organic remains in ocean water are broken down by bacteria.
- _____ 2. The Arctic Ocean is covered by pack ice during most of the year.
- _____ 3. Pure fresh water is denser than ocean water.
- _____ 4. The temperature of ocean water drops sharply not far below the ocean surface.
- _____ 5. Zooplankton use the energy from sunlight to carry on photosynthesis.
- _____ 6. Plants that grow on the ocean floor belong to a group of organisms called benthos.
- _____ 7. Squid and octopus live in the hadal ocean bottom zone.
- _____ 8. The Delbuoy system of removing salt from ocean water developed by Pleass is powered by ocean waves.
- _____ 9. In general, the elements needed by marine life are released at great depths in the ocean.
- _____ 10. Pollutants can be found in measurable amounts everywhere in the oceans.

Choose the one best response. Write the letter of that choice in the space provided.

- _____ 11. What percentage of ocean water is pure water?
a. 3.5% b. 39.5% c. 57.5% d. 96.5%
- _____ 12. Which of the following gases dissolves most easily in ocean water?
a. hydrogen b. oxygen
c. nitrogen d. carbon dioxide
- _____ 13. The most abundant major element dissolved in ocean water is:
a. boron. b. chlorine. c. calcium. d. potassium.
- _____ 14. The most valuable resource taken from the ocean is:
a. copper deposited on the ocean floor.
b. calcite found in seashells.
c. petroleum from beneath the ocean floor.
d. gold dissolved in ocean water.

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Choose the one best response. Write the letter of that choice in the space provided.

_____ 15. Which of the following elements is greatly depleted from ocean water by heavy plant growth?

- a. nitrogen b. magnesium c. oxygen d. sodium

_____ 16. Nodules are a valuable source of:

- a. carbon. b. manganese. c. silicon. d. magnesium.

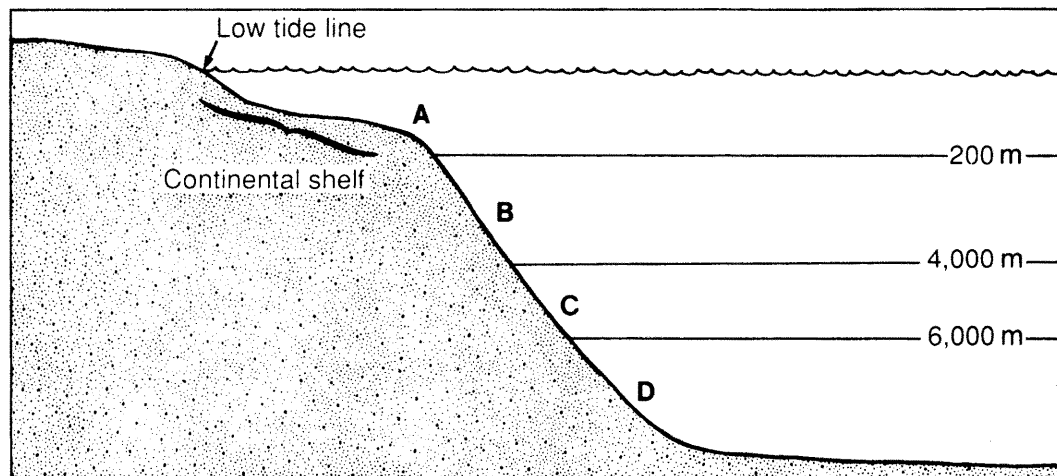
_____ 17. In which of the following environments does salinity tend to be higher?

- a. surface temperate waters b. surface tropical waters
c. deep lake waters d. deep tropical waters

_____ 18. Freezing ocean water can create fresh water because the salt:

- a. crystallizes within the ice.
b. remains in pockets of liquid water.
c. freezes faster than water.
d. evaporates as the water is frozen.

Use the diagram below to answer questions 19 and 20.



_____ 19. Which ocean environment in the diagram represents the sublittoral zone?

- a. A b. B c. C d. D

_____ 20. Which ocean environment in the diagram represents the hadal zone?

- a. A b. B c. C d. D

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Read each question and answer it in the space provided.

21. What is defined by the number of grams of dissolved salt in 1 kg of ocean water? _____
22. What color wavelengths of light tend to be reflected by ocean water? _____
23. What is the process in which deep water moves upward to replace surface water? _____
24. What are the free-floating, microscopic plants found in most regions of the near-surface ocean called? _____
25. Which benthic zone is a relatively unstable environment for marine life but is populated by crabs, clams, and seaweed? _____
26. What is the name for the larger swimming ocean animals that eat microscopic animals and plants? _____
27. Which ocean environment extends seaward beyond the continental shelf? _____
28. What is the general process of converting ocean water to fresh water called? _____
29. What factor, besides the amount of dissolved solids, affects the density of water? _____
30. What is the term for the farming of the ocean that involves developing and raising special breeds of marine plants and animals? _____

Read each question or statement and answer it in the space provided.

31. Explain why a thermocline exists beneath much of the ocean surface.
