

Unit 7 Exam

1. Sound waves travel at about 1,500 m/s through sea water. Suppose a sound wave travels from the ocean floor back to a ship in 7.5 seconds. What is the depth of the ocean floor being explored?

- ☐ 0.005 km
 - ☐ 150,000 m
 - ☐ 200 m
 - ☐ 11,250 m
-

2. Which of the following is not a dissolved gas found in ocean water?

- ☐ Cl
 - ☐ N
 - ☐ CO
 - ☐ O
-

3. If you wanted to know where to locate an ideal fishing spot, which type of equipment would you use?

- ☐ Sonar
 - ☐ Radar
 - ☐ Doppler
 - ☐ Satellite
-

4. What is formed when water carried onto a beach by breaking waves is pulled back into deeper water, forming an irregular

- ☐ Rip current
 - ☐ Undertow
 - ☐ Breaker
 - ☐ Tsunami
-

5. Modern oceanography commenced _____.

- ☐ with the *HMS Challenger* and its research and discoveries
 - ☐ with the Industrial Age
 - ☐ with the advent of sonar
 - ☐ when ancient civilizations started using submersibles
-

6. Match the definition with the correct term: the shallow sea floor between the shore and the deep-ocean bottom.

- ☐ Continental slope
 - ☐ Continental shelf
 - ☐ Continental rise
 - ☐ Continental margin
-

7. If you are on a field trip to the ocean and you recovered 100 grams of ocean salts from a sample of ocean water, based on dissolved solids in ocean water, what would be the mass of all elements in the sample that are not Na or Cl?

- ☐ 25%
 - ☐ 15%
 - ☐ 85%
 - ☐ 55%
-

8. You are a scientist working on the coast of Alaska, monitoring the ocean for signs of tsunamis. You will be looking for the following except _____.

- ☐ incredibly strong, lengthy winds
 - ☐ earthquakes
 - ☐ volcanic eruptions
 - ☐ underwater landslides
-

9. The removal of which trophic level of the food chain would have the biggest effect on the ecosystem?

- ☐ Crabs
 - ☐ Fish
 - ☐ Plankton
 - ☐ Whales
-

10. Why does the effect of rising global temperatures in the ocean have such a broad effect on Earth?

- ☐ As water warms, it can hold more carbon dioxide, so less CO₂ is released into the atmosphere, where it is a greenhouse gas.
 - ☐ As water cools, it can hold less carbon dioxide, so more CO₂ is released into the atmosphere, where it is a greenhouse gas.
 - ☐ There is no overwhelming effect due to rising global temperatures.
 - ☐ As water warms, it can hold less carbon dioxide, so more CO₂ is released into the atmosphere, where it is a greenhouse gas.
-

11. Colder water sinks because it is denser.

- ☐ True
 - ☐ False
-

12. Ocean water is _____ dense than fresh water because _____.

- ☐ less; the dissolved solids add mass
 - ☐ more; the dissolved solids have less volume
 - ☐ more; the dissolved solids add mass
 - ☐ less; because it is generally colder
-

13. If you were drilling core samples in the ocean basin and the core samples you brought up had lower levels of biogenic upper levels were composed of inorganic sediments, what could you conclude?

- ☐ That location used to have less organisms dying there.
 - ☐ That location used to have more organisms living there.
 - ☐ That location is colder than usual.
 - ☐ That location is warmer than usual.
-

14. Correctly match the oceanic zone with its ocean basin location.

- ☐ Bathypelagic: continental slope
 - ☐ Hadal: abyssal plain
 - ☐ Epipelagic: trench
 - ☐ Abyssopelagic: continental shelf
-

15. Distillation is very expensive because of the high cost of energy needed for the process.

- ☐ True
 - ☐ False
-

16. What is so unusual about the mid-ocean ridge that runs through Iceland?

- ☐ It is very long.
 - ☐ The plates there spread fast.
 - ☐ It is above sea level
 - ☐ There is nothing special about it.
-

17. Why might you find more biodiversity in the lower layers of the ocean?

- ☐ They contain more dissolved gases.
 - ☐ Animals tend to like colder temperatures.
 - ☐ They are more saline.
 - ☐ There are less dissolved gases there.
-

18. The Antarctic Circumpolar Current crosses how many major oceans?

- ☐ five
 - ☐ three
 - ☐ two
 - ☐ four
-

19. A biogenic sediment can be composed of all the following except _____.

- ☐ shells
 - ☐ dead fish
 - ☐ bones
 - ☐ rocks
-

20. Which of the following is a valuable resource retrieved from the oceans?

- ☐ Drinking water
 - ☐ Petroleum
 - ☐ Salt
 - ☐ All of the above
-

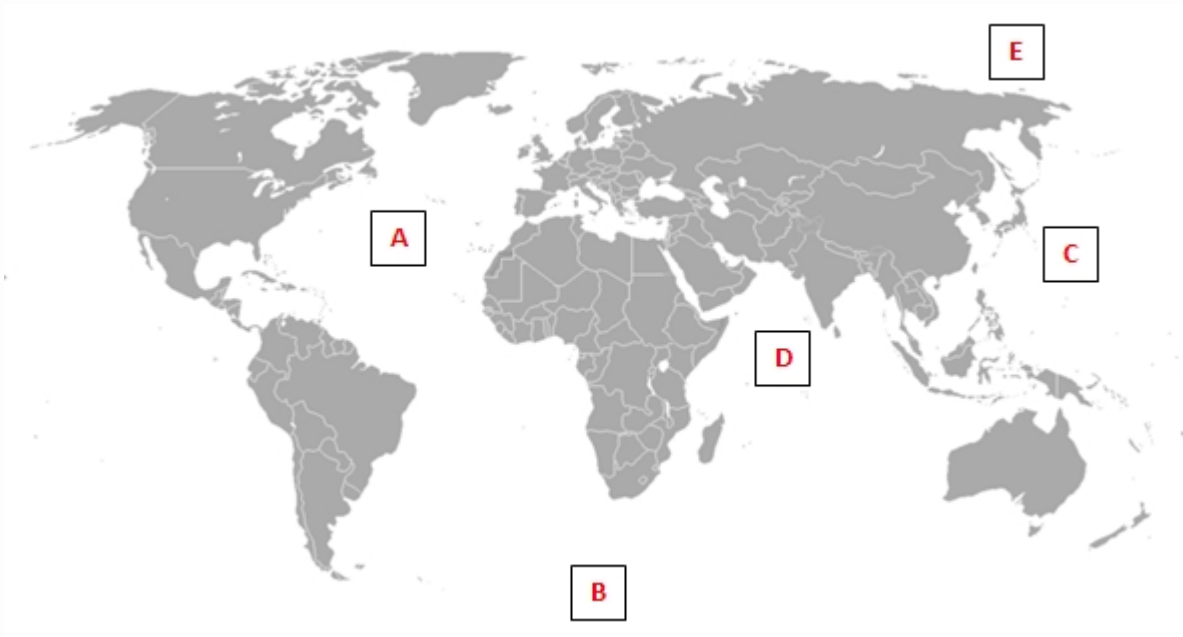
21. What is the main difference between an ocean and a sea?

- ☐ A sea is smaller.
 - ☐ A sea is always surrounded by land.
 - ☐ A sea contains salt water.
 - ☐ An ocean contains salt water.
-

22. The soft, fine material that covers about 40 percent of the ocean floor is a mud.

- ☐ True
 - ☐ False
-

23. Which ocean is the fourth-largest and contains water in more than one matter phase?



- ☐ A
- ☐ D
- ☐ B
- ☐ E

24. What would happen if we experienced another ice age?

- ☐ Nothing would happen to the continental margin.
- ☐ The continental slope would become farther away from the coastline.
- ☐ Less of the continental shelf would be exposed.
- ☐ More of the continental shelf would be exposed.

25. In a science fiction movie, a group of scientists needs to go to the center of the Earth with a special machine. To make they want to enter Earth's crust at the deepest point on Earth. Where would they want to enter?

- ☐ A trench
 - ☐ An abyssal plain
 - ☐ A seamount
 - ☐ A submarine canyon
-

26. Longshore currents move in a zigzag pattern.

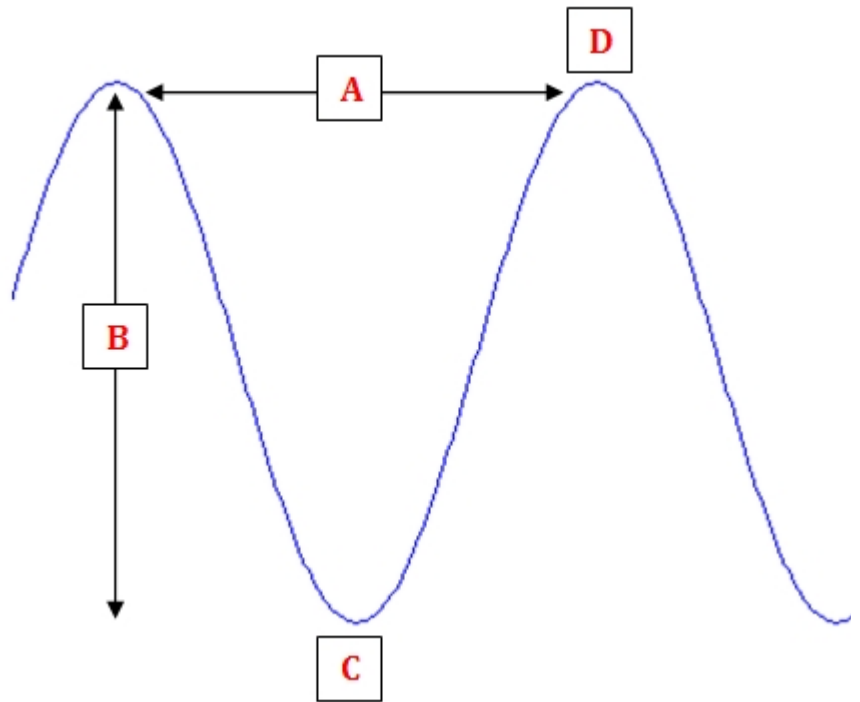
- ☐ True
- ☐ False

27. What best describes a thermocline?

- ☐ An area of extremely cold temperatures
- ☐ An area where the temperature of the ocean sharply increases
- ☐ An area where the temperature of the ocean sharply decreases
- ☐ An area of warm temperatures in the ocean

28.

Which wave part is indicated by "D"?



- ☐ Wave height
- ☐ Crest
- ☐ Wave length
- ☐ Trough

29. What causes the warmer climates on the southern coast of Iceland?

- ☐ East Greenland Current
 - ☐ Canary Current
 - ☐ Sargasso Sea
 - ☐ North Atlantic Current
-

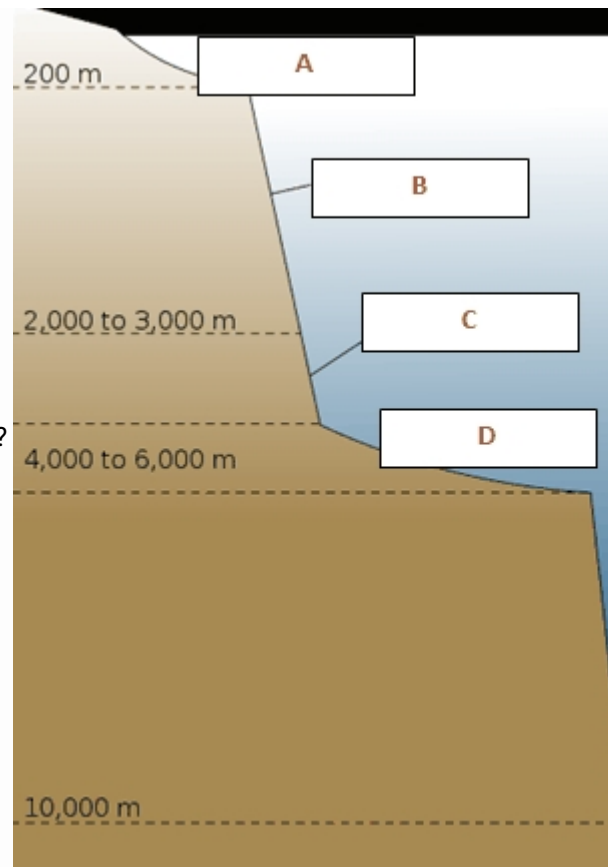
30. Inorganic sediments are transported to ocean basins via all the following methods except _____.

- ☐ asteroids
 - ☐ wind
 - ☐ meteorites
 - ☐ icebergs
-

31. Where would you find the thickest abyssal plain sediment?

- ☐ Younger oceanic crusts without trenches
 - ☐ Younger oceanic crusts with trenches
 - ☐ Older oceanic crusts without trenches
 - ☐ Older oceanic crusts with trenches
-

32.



Which two areas of the diagram below are comprised of sediment?

- ☐ B, C
- ☐ A, B
- ☐ C, E
- ☐ A, C

33. If you are on a field trip to the ocean and you recovered 250 grams of ocean salts from a sample of ocean water, based on the percentages of dissolved solids in ocean water, what would be the mass of chlorine in the sample?

- ☐ 0.0022 g
- ☐ 4.55 g
- ☐ 137.5 g
- ☐ 0.22 g

34. You can find warm surface currents in all of the following areas except the _____.

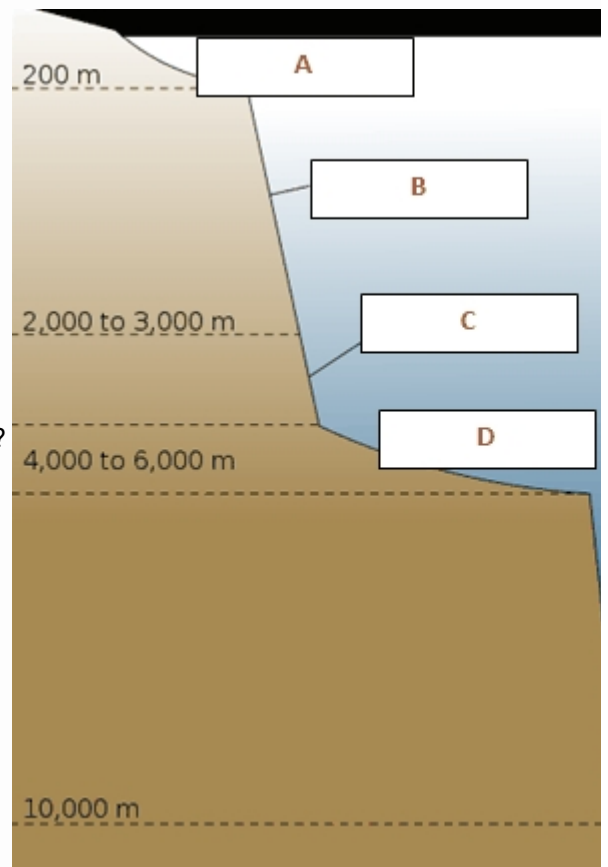
- ☐ Southern Ocean
- ☐ Atlantic Ocean
- ☐ Indian Ocean
- ☐ Pacific Ocean

35. What is the main difference between a bathysphere and a bathyscaph?

- ☐ People can be on a bathyscaph, while they cannot be on a bathysphere.
- ☐ A bathyscaph remains attached to the main research vessel, while the bathysphere is detached and free-moving.
- ☐ A bathysphere is much larger than a bathyscaph.
- ☐ A bathysphere remains attached to the main research vessel, while the bathyscaph is detached and free-moving.

36.

A submarine canyon would occur in which of the following regions?



- ☐ E
- ☐ C
- ☐ A
- ☐ D

37. As you get deeper in the ocean, you find more marine life.

- ☐ True
- ☐ False

38. What percentage of Earth's ocean water mass is composed of dissolved solids?

- ☐ 85.0%
- ☐ 30.6%
- ☐ 3.5%
- ☐ 55.0%

39. How can the mining of nodules strain relations between countries?

- ☐ Nodules are hard to harvest and cause financial strain.
- ☐ Nodules exist in areas beyond national boundaries.
- ☐ Nodules are very rare and hard to find.
- ☐ Nodules can bring a lot of money to the black market.

40. What do we call an area of Earth that can hold large amounts of carbon dioxide?

- ☐ Reservoir
- ☐ CO station
- ☐ Tank
- ☐ Sink