

## Chapter 02 The Sea Floor

### Multiple Choice Questions

1. How much of the Earth's surface is covered by the world ocean?

- A. 53%
- B. 65%
- C. 71%**
- D. 78%
- E. 80%

2. The largest percentage of the world ocean is found in the:

- A. Northern hemisphere.
- B. Southern hemisphere.**
- C. Eastern hemisphere.
- D. Western hemisphere.
- E. The ocean is evenly distributed.

3. One of the following is **not** one of the world's major ocean basins:

- A. Atlantic Ocean.
- B. Arctic Ocean.
- C. Indian Ocean.
- D. Antarctic Ocean.**
- E. Pacific Ocean.

4. The world's smallest and shallowest ocean is:

- A. Atlantic Ocean.
- B.** Arctic Ocean.
- C. Indian Ocean.
- D. Antarctic Ocean.
- E. Pacific Ocean.

5. The world's largest and deepest ocean is:

- A. Atlantic Ocean.
- B. Arctic Ocean.
- C. Indian Ocean.
- D. Antarctic Ocean.
- E.** Pacific Ocean.

6. Oceanographers often use the name "Southern Ocean" to refer to the body of water:

- A.** Around Antarctica.
- B. In the South Pacific.
- C. South of the North Sea.
- D. South of Florida.
- E. Around the southern tip of India.

7. The **Big Bang** was:

- A. The origin of the Earth's magnetic field.
- B. The beginning of plate tectonics and continental drift.
- C. The origin of the oceans as water condensed on Earth.
- D.** The giant cosmic explosion that occurred 13.7 billion years ago and created the Universe.

8. Density is:

- A.** The mass of a substance per unit volume.
- B. A measure of weight.
- C. The mass of a substance multiplied by its percentage volume of water.
- D. A measure of volume.
- E. The volume occupied by a particular substance in relation to that of water.

9. There is evidence that the earth and the rest of the solar system formed about:

- A. 5 million years ago.
- B. 1 billion years ago.
- C.** 4.5 billion years ago.
- D. 10.5 billion years ago.
- E. 10 million years ago.

10. The semi-solid layer of the earth found below the crust and outside of the core is called the:

- A. Inner core.
- B.** Mantle.
- C. Inner crust.
- D. Outer core.
- E. Oceanic crust.

11. The earth's magnetic field is thought to be caused by movements of liquid metal in which of the earth's layers?

- A. Inner core.
- B.** Outer core.
- C. Oceanic crust.
- D. Mantle.
- E. Continental crust.

12. The thinnest layer of the earth is the:

- A. Inner core.
- B. Outer core.
- C.** Crust.
- D. Mantle.

13. Which of the following is **not true** of oceanic crust?

- A. It is thinner than continental crust
- B. It is denser than continental crust
- C. It is geologically younger in most places than continental crust
- D. It lies below sea level
- E.** It consists mostly of granite

14. Which of the following is **not true** of mid-ocean ridges?

- A. Earthquakes and volcanoes are associated with them
- B.** The sediment covering gets thinner as one moves away from them towards the continents
- C. The rock on the sea floor is older as one moves away from them
- D. Sea floor spreading is associated with them
- E. All are interconnected

15. Which of the following is **true** about lithospheric plates?

- A. Only contain continental crust
- B. Only contain oceanic crust
- C. Collide with one another at the mid-ocean ridge
- D.** Float on the upper mantle
- E. Are directly connected with the inner core of the earth

16. Which of the following statements is **NOT** true?

- A. Oceanic crust is made of a rock-type called basalt
- B. Oceanic crust is denser than continental crust
- C. Oceanic crust is thinner than continental crust
- D.** Oceanic crust is older than continental crust
- E. There are significant chemical differences between oceanic and continental crust

17. Trenches are formed in areas where:

- A. A plate is lifted by another.
- B. A plate moves along side another in a transform motion.
- C. A plate splits and opens up.
- D. Sea floor spreading takes place.
- E.** A plate sinks beneath another.

18. The **process** by which a lithospheric plate descends into the mantle is called:

- A. Continental drift.
- B. Induction.
- C. Sea floor spreading.
- D.** Subduction.
- E. Faulting.

19. The friction zone along the shear boundary such as the one in California between two lithospheric plates is called a:

- A.** Fault.
- B. Rift.
- C. Trench.
- D. Mid-ocean ridge.
- E. Sea.

20. Which of these places is an example of an island arch along a trench:

- A.** Aleutian Islands.
- B. Hawaiian Islands.
- C. Australia.
- D. Galápagos Islands.
- E. Bermuda.

21. Which is **not** a type of lithospheric plate boundary?

- A. Shear boundary
- B. Continental shelf**
- C. Trench
- D. Mid-ocean ridge

22. The type of plate boundary where plates move past each other in a sort of lateral motion is called:

- A. Island arc.
- B. Subduction zone.
- C. Trench.
- D. Convection zone.
- E. Shear boundary.**

23. Evidence of plate tectonics is provided by:

- A. Magnetic anomalies/paleomagnetic evidence.
- B. Sea floor spreading.
- C. The existence of mid ocean ridges.
- D. All answers are correct.**
- E. Sea floor spreading and The existence of mid ocean ridges only.

24. (*p. 31*) The name of the vast single world ocean that was present about 200 million years ago is:

- A. Sinus Borealis.
- B. Pangaea.
- C. Tethys.
- D. Panthalassa.**
- E. Gondwana.

25. Lithogenous sediments are those that come from:

- A. Plants.
- B. Living organisms in general.
- C. Deep-water volcanoes.
- D.** Erosion of land.
- E. Corals.

26. The outer edge of the continental margin is the:

- A.** Shelf break.
- B. Continental slope.
- C. Continental rise.
- D. Edge of the abyssal plain.
- E. Continental edge.

27. The **steepest** part of the continental margin where it descends down to the ocean floor is known as the:

- A. Shelf break.
- B.** Continental slope.
- C. Continental rise.
- D. Edge of the abyssal plain.
- E. Continental edge.

28. The shallow part of the continental margin that is closer to land and is a critical marine habitat because light can reach all the way to the bottom in most of it is known as:

- A. Shelf break.
- B. Continental slope.
- C. Continental rise.
- D. Edge of the abyssal plain.
- E.** Continental shelf.

29. The west coast of South America is an active continental margin. As such, it is characterized by all of the following **except**:

- A. Earthquakes.
- B. Volcanoes.
- C. Wide continental shelf.**
- D. Steep and rocky shorelines.
- E. Steep continental slope.

30. The east coast of the United States is a passive continental margin which is characterized by:

- A. Mountains along the coast.
- B. Steep and rocky shorelines.
- C. Narrow continental shelf.
- D. Offshore trench.
- E. Gentle continental slope.**

31. Black smoker stacks or columns form as a result of the accumulation of:

- A. Deep-water animals.
- B. Lava.
- C. Biogenous sediments.
- D. Metallic-sulfide minerals reacting with seawater.**
- E. Material released from the formation of trenches.

32. Sea levels have naturally fluctuated through the vast epochs of geologic time. What is occurring now with regards to sea level?

- A. Sea level is absolutely falling
- B. Sea level is absolutely rising
- C. Sea level always remains stable
- D. Scientists are not sure**
- E. Sea level varies by location



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33. The most biologically rich part of the ocean is the:

- A. Shelf break.
- B. Continental shelf.**
- C. Continental slope.
- D. Continental rise.
- E. Deep-sea floor.