

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

Chapter 22

Movements of the Ocean

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. Continental land masses act as barriers to surface currents.
- _____ 2. The Coriolis effect is caused by the earth's rotation.
- _____ 3. The overall pattern of the movement of surface currents in the Northern Hemisphere is clockwise.
- _____ 4. The Gulf Stream is a warm current.
- _____ 5. Longshore currents create a zigzag-shaped shoreline.
- _____ 6. Because of frictional pull of tides on the ocean floor, the earth's rotational speed is slowing.
- _____ 7. The tidal movement toward the coast is called the ebb tide.
- _____ 8. Tidal flats are largely unaffected by tidal currents.
- _____ 9. The winds in the Indian Ocean that change direction with each season are called typhoons.
- _____ 10. Deep currents tend to have cold, highly saline water in them.

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

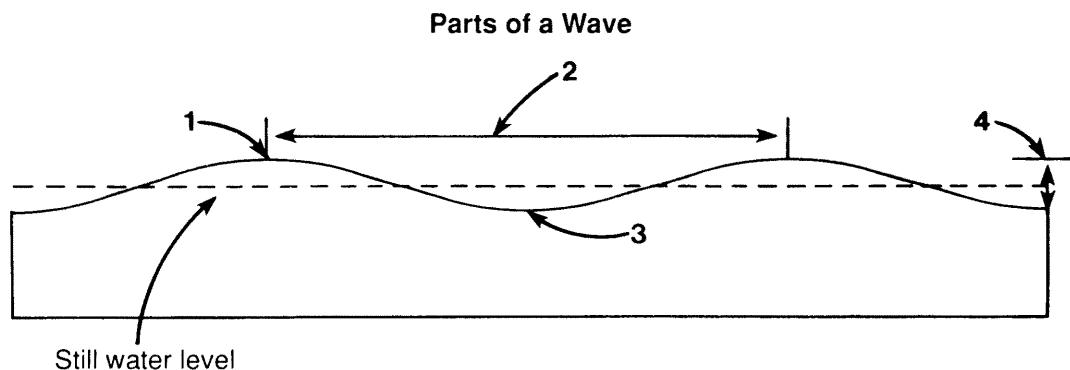
- _____ 11. The global winds that are located just north and south of the equator are called the:
a. rip currents. b. westerlies. c. trade winds. d. monsoons.
- _____ 12. The direction of water particles in a wave in deep water can best be described as moving:
a. forward. b. in a long ellipse.
c. up and down. d. in a circle.
- _____ 13. The relatively weak, irregular current produced when the water from breaking waves is pulled back to deep water is called:
a. drift. b. a longshore current.
c. an undertow. d. a rip current.

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

- _____ 14. Turbidity currents probably form as a result of:
- a. underwater landslides.
 - b. temperature differences.
 - c. surface winds.
 - d. salinity differences.
- _____ 15. Which of the following occurs only during the full and new moon phases?
- a. spring tides
 - b. tidal oscillations
 - c. neap tides
 - d. tidal bores
- _____ 16. Where are tidal currents generally strongest?
- a. along straight coastlines
 - b. in the open ocean
 - c. along irregular coastlines
 - d. in a narrow bay
- _____ 17. Which of the following is the deepest current of the major oceans?
- a. Equatorial Countercurrent
 - b. Antarctic Bottom Water
 - c. South Equatorial Current
 - d. North Atlantic Drift
- _____ 18. The speed at which a wave moves is calculated by:
- a. multiplying wavelength and period.
 - b. dividing wavelength by period.
 - c. multiplying wave period and height.
 - d. dividing wave period by height.

Use the diagram below to answer questions 19 and 20.



- _____ 19. Which number in the diagram indicates a wave crest?
- a. 1
 - b. 2
 - c. 3
 - d. 4
- _____ 20. Which number in the diagram indicates a wavelength?
- a. 1
 - b. 2
 - c. 3
 - d. 4

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Read each question and answer it in the space provided.

21. What general term is used to describe the type of current that is driven by the wind?

22. In what body of water does the tidal range exceed 15 m due to tidal oscillations.

23. What is the term for the time it takes for one complete wavelength to pass a fixed point?

24. What is the bending of waves called?

25. What is another name for a seismic sea wave?

26. What are the daily changes in the level of an ocean surface called?

27. Which planetary body has the most influence on the earth's ocean tides?

28. What is formed when the crest is blown off of a wave?

29. What is the term for the difference between high tide and low tide at a given location?

30. What is the term used to describe the distance that wind has traveled across open water?

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

31. What causes a wave to break?
