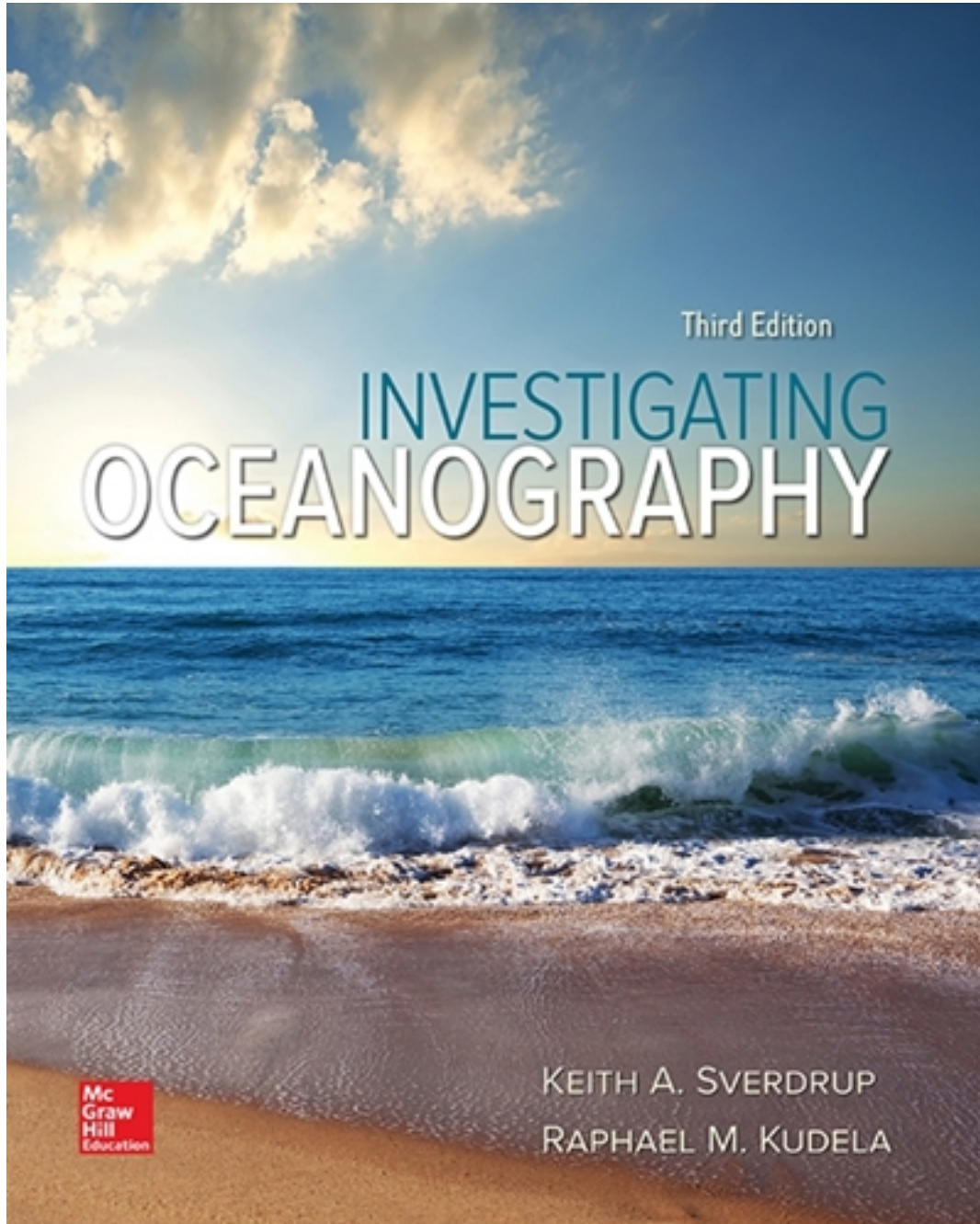


# Test Bank for Investigating Oceanography 3rd Edition by Sverdrup

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# Test Bank

***Investigating Oceanography, 3e (Sverdrup)***

**Chapter 2 Earth Structure and Plate Tectonics**

1) Identify all of the types of plate boundaries that are associated with active volcanism.

- A) Divergent
- B) Ocean-Ocean Convergent
- C) Transform
- D) Continent-Continent Convergent
- E) Ocean-Continent Convergent

Answer: A, B, E

Section: 02.04 Plate Tectonics

Topic: Plate Tectonics

Bloom's: 1. Remember

Gradable: automatic

Chapter: 02 Earth Structure and Plate Tectonics

2) Identify all of the different observations Alfred Wegener used to support his theory of continental drift.

- A) Seafloor magnetic anomalies
- B) Geographic fit of the continents
- C) Studies of fossil plants and animals
- D) Dipping zones of earthquakes at ocean trenches
- E) Patterns of glaciation
- F) Shallow earthquakes along transform faults
- G) Matching bodies of rock on either side of the Atlantic
- H) Alignment of mountain ranges when the Atlantic is closed
- J) High heat flow at oceanic ridges

Answer: B, C, E, G, H

Section: 02.02 History of a Theory: Continental Drift

Topic: History of a Theory: Continental Drift

Bloom's: 1. Remember

Gradable: automatic

Chapter: 02 Earth Structure and Plate Tectonics

3) Identify all of the different observations used to support Harry Hess's theory of seafloor spreading.

- A) Seafloor magnetic anomalies
- B) Geographic fit of the continents
- C) Studies of fossil plants and animals
- D) Dipping zones of earthquakes at ocean trenches
- E) Patterns of glaciation
- F) Shallow earthquakes along transform faults
- G) Matching bodies of rock on either side of the Atlantic
- H) Alignment of mountain ranges when the Atlantic is closed
- J) High heat flow at oceanic ridges

Answer: A, D, F, J

Section: 02.03 Evidence for a New Theory: Seafloor Spreading

Topic: Evidence for a New Theory: Seafloor Spreading

Bloom's: 1. Remember

Gradable: automatic

Chapter: 02 Earth Structure and Plate Tectonics

4) Earth's inner core is liquid whereas its outer core is solid.

Answer: FALSE

Section: 02.01 Earth's Interior

Topic: Earth's Interior

Bloom's: 1. Remember

Gradable: automatic

Chapter: 02 Earth Structure and Plate Tectonics

5) The refraction and shadow patterns of seismic P-waves and S-waves indicate the dimensions and properties of Earth's layers.

Answer: TRUE

Section: 02.01 Earth's Interior

Topic: Earth's Interior

Bloom's: 1. Remember

Gradable: automatic

Chapter: 02 Earth Structure and Plate Tectonics

6) Shear waves do not pass through a solid-liquid boundary between Earth's layers. Compressional waves can pass this type of boundary.

Answer: TRUE

Section: 02.01 Earth's Interior

Topic: Earth's Interior

Bloom's: 1. Remember

Gradable: automatic

Chapter: 02 Earth Structure and Plate Tectonics

7) Oceanic-type crust is more dense than continental-type crust.

Answer: TRUE

Section: 02.01 Earth's Interior

Topic: Earth's Interior

Bloom's: 1. Remember

Gradable: automatic

Chapter: 02 Earth Structure and Plate Tectonics

8) The continental landmasses are less dense than the mantle and are buoyed up by depressing the underlying mantle.

Answer: TRUE

Section: 02.01 Earth's Interior

Topic: Earth's Interior

Bloom's: 1. Remember

Gradable: automatic

Chapter: 02 Earth Structure and Plate Tectonics

9) The mid-ocean ridges and rises are spreading centers where new oceanic crust is created.

Answer: TRUE

Section: 02.04 Plate Tectonics

Topic: Plate Tectonics

Bloom's: 1. Remember

Gradable: automatic

Chapter: 02 Earth Structure and Plate Tectonics

10) The thickness of deep-sea sediments increases with distance from a spreading center.

Answer: TRUE

Section: 02.03 Evidence for a New Theory: Seafloor Spreading

Topic: Evidence for a New Theory: Seafloor Spreading

Bloom's: 1. Remember

Gradable: automatic

Chapter: 02 Earth Structure and Plate Tectonics

11) The largest lithospheric plate is the Pacific Plate.

Answer: TRUE

Section: 02.04 Plate Tectonics

Topic: Plate Tectonics

Bloom's: 1. Remember

Gradable: automatic

Chapter: 02 Earth Structure and Plate Tectonics

12) The edge of an active continental margin bordered by a deep-sea trench is wide and shallow with deep deposits of land-derived sediments.

Answer: FALSE

Section: 02.04 Plate Tectonics

Topic: Plate Tectonics

Bloom's: 1. Remember

Gradable: automatic

Chapter: 02 Earth Structure and Plate Tectonics

13) Volcanic activity associated with subduction zones is more gentle and less explosive than volcanic activity associated with hot spots and mid-ocean ridges.

Answer: FALSE

Section: 02.04 Plate Tectonics

Topic: Plate Tectonics

Bloom's: 1. Remember

Gradable: automatic

Chapter: 02 Earth Structure and Plate Tectonics

14) The steeper profile of the Mid-Atlantic Ridge compared to the East Pacific Rise indicates that the Mid-Atlantic Ridge is the faster spreading center.

Answer: FALSE

Section: 02.04 Plate Tectonics

Topic: Plate Tectonics

Bloom's: 1. Remember

Gradable: automatic

Chapter: 02 Earth Structure and Plate Tectonics

15) The age of the seamounts from Hawaii to Midway Island increases in age from east to west.

Answer: TRUE

Section: 02.05 Motion of the Plates

Topic: Motion of the Plates

Bloom's: 1. Remember

Gradable: automatic

Chapter: 02 Earth Structure and Plate Tectonics

16) The North Atlantic Ocean was the first modern ocean to open during the breakup of Pangaea.

Answer: FALSE

Section: 02.02 History of a Theory: Continental Drift

Topic: History of a Theory: Continental Drift

Bloom's: 1. Remember

Gradable: automatic

Chapter: 02 Earth Structure and Plate Tectonics

17) Isostatic columns of crustal material produce equal pressures deep within the mantle.

Answer: TRUE

Section: 02.01 Earth's Interior

Topic: Earth's Interior

Bloom's: 1. Remember

Gradable: automatic

Chapter: 02 Earth Structure and Plate Tectonics

18) The San Andreas Fault is an example of a transform fault.

Answer: TRUE

Section: 02.04 Plate Tectonics

Topic: Plate Tectonics

Bloom's: 1. Remember

Gradable: automatic

Chapter: 02 Earth Structure and Plate Tectonics

19) Epicenters are points on Earth's surface directly above a hot spot.

Answer: FALSE

Section: 02.03 Evidence for a New Theory: Seafloor Spreading

Topic: Evidence for a New Theory: Seafloor Spreading

Bloom's: 1. Remember

Gradable: automatic

Chapter: 02 Earth Structure and Plate Tectonics

20) Deep earthquakes, (below 100 km, or 60 mi) are usually associated with oceanic ridges.

Answer: FALSE

Section: 02.03 Evidence for a New Theory: Seafloor Spreading

Topic: Evidence for a New Theory: Seafloor Spreading

Bloom's: 1. Remember

Gradable: automatic

Chapter: 02 Earth Structure and Plate Tectonics

21) The deep mantle below the asthenosphere is called the mesosphere.

Answer: TRUE

Section: 02.01 Earth's Interior

Topic: Earth's Interior

Bloom's: 1. Remember

Gradable: automatic

Chapter: 02 Earth Structure and Plate Tectonics

22) P waves travel more quickly than S waves.

Answer: TRUE

Section: 02.01 Earth's Interior

Topic: Earth's Interior

Bloom's: 1. Remember

Gradable: automatic

Chapter: 02 Earth Structure and Plate Tectonics

23) P waves travel only along the surface of the Earth.

Answer: FALSE

Section: 02.01 Earth's Interior

Topic: Earth's Interior

Bloom's: 1. Remember

Gradable: automatic

Chapter: 02 Earth Structure and Plate Tectonics

24) S waves are able to travel through both solid and liquid.

Answer: FALSE

Section: 02.01 Earth's Interior

Topic: Earth's Interior

Bloom's: 1. Remember

Gradable: automatic

Chapter: 02 Earth Structure and Plate Tectonics

25) Continental crust is generally thicker and less dense than oceanic crust.

Answer: TRUE  
Section: 02.01 Earth's Interior  
Topic: Earth's Interior  
Bloom's: 1. Remember  
Gradable: automatic  
Chapter: 02 Earth Structure and Plate Tectonics

26) The taller a mountain is, the deeper its root will extend into the asthenosphere.

Answer: TRUE  
Section: 02.01 Earth's Interior  
Topic: Earth's Interior  
Bloom's: 1. Remember  
Gradable: automatic  
Chapter: 02 Earth Structure and Plate Tectonics

27) Hess's 1960s theory of mantle convection and seafloor spreading was essentially correct.

Answer: TRUE  
Section: 02.03 Evidence for a New Theory: Seafloor Spreading  
Topic: Evidence for a New Theory: Seafloor Spreading  
Bloom's: 1. Remember  
Gradable: automatic  
Chapter: 02 Earth Structure and Plate Tectonics

28) The oldest oceanic crust is generally in the center of the ocean basin near the mid-ocean ridge or rise system.

Answer: FALSE  
Section: 02.03 Evidence for a New Theory: Seafloor Spreading  
Topic: Evidence for a New Theory: Seafloor Spreading  
Bloom's: 1. Remember  
Gradable: automatic  
Chapter: 02 Earth Structure and Plate Tectonics

29) Sediment thickness on the oceanic crust tends to be greatest in the center of ocean basins.

Answer: FALSE  
Section: 02.03 Evidence for a New Theory: Seafloor Spreading  
Topic: Evidence for a New Theory: Seafloor Spreading  
Bloom's: 1. Remember  
Gradable: automatic  
Chapter: 02 Earth Structure and Plate Tectonics



30) Based on the current directions of plate motion, China and the West Coast of the United States are getting closer.

Answer: TRUE  
Section: 02.05 Motion of the Plates  
Topic: Motion of the Plates  
Bloom's: 1. Remember  
Gradable: automatic  
Chapter: 02 Earth Structure and Plate Tectonics

31) Volcanic activity is common at transform plate boundaries.

Answer: FALSE  
Section: 02.04 Plate Tectonics  
Topic: Plate Tectonics  
Bloom's: 1. Remember  
Gradable: automatic  
Chapter: 02 Earth Structure and Plate Tectonics

32) The thickness of oceanic crust increases with age.

Answer: TRUE  
Section: 02.04 Plate Tectonics  
Topic: Plate Tectonics  
Bloom's: 1. Remember  
Gradable: automatic  
Chapter: 02 Earth Structure and Plate Tectonics

33) The deepest earthquakes occur in subduction zones at oceanic-oceanic plate convergent boundaries.

Answer: TRUE  
Section: 02.04 Plate Tectonics  
Topic: Plate Tectonics  
Bloom's: 1. Remember  
Gradable: automatic  
Chapter: 02 Earth Structure and Plate Tectonics

34) California is an example of a passive continental margin.

Answer: FALSE  
Section: 02.04 Plate Tectonics  
Topic: Plate Tectonics  
Bloom's: 1. Remember  
Gradable: automatic  
Chapter: 02 Earth Structure and Plate Tectonics

35) Deposits of sediments are usually thicker along passive continental margins.

Answer: TRUE

Section: 02.04 Plate Tectonics

Topic: Plate Tectonics

Bloom's: 1. Remember

Gradable: automatic

Chapter: 02 Earth Structure and Plate Tectonics

36) Spreading at mid-ocean ridges tends to occur in increments rather than continuously.

Answer: TRUE

Section: 02.04 Plate Tectonics

Topic: Plate Tectonics

Bloom's: 1. Remember

Gradable: automatic

Chapter: 02 Earth Structure and Plate Tectonics

37) The density of Earth materials \_\_\_\_\_ as the core is approached.

A) remains the same

B) decreases

C) increases

D) increases then decreases

E) decreases then increases

Answer: C

Section: 02.01 Earth's Interior

Topic: Earth's Interior

Bloom's: 1. Remember

Gradable: automatic

Chapter: 02 Earth Structure and Plate Tectonics

38) The Moho is located between the \_\_\_\_\_.

A) lithosphere and the asthenosphere

B) crust and the mantle

C) mantle and the outer core

D) inner and outer cores

E) continental margin and the abyssal plain

Answer: B

Section: 02.01 Earth's Interior

Topic: Earth's Interior

Bloom's: 1. Remember

Gradable: automatic

Chapter: 02 Earth Structure and Plate Tectonics

- 39) Which of the following help us believe that Earth's mass is distributed spherically and uniformly around Earth's center?
- A) Lack of roughness of Earth's surface
  - B) Earth's spherical shape
  - C) Lack of rotational wobble
  - D) Earth's spherical shape and lack of rotational wobble
  - E) Lack of roughness of Earth's surface, Earth's spherical shape, and lack of rotational wobble

Answer: D

Section: 02.01 Earth's Interior

Topic: Earth's Interior

Bloom's: 1. Remember

Gradable: automatic

Chapter: 02 Earth Structure and Plate Tectonics

- 40) Which of Earth's layers contains the greatest volume of material?
- A) Inner core
  - B) Outer core
  - C) Mantle
  - D) Lithosphere
  - E) Outer crust

Answer: C

Section: 02.01 Earth's Interior

Topic: Earth's Interior

Bloom's: 1. Remember

Gradable: automatic

Chapter: 02 Earth Structure and Plate Tectonics

- 41) The deepest portion of the lithosphere is formed from \_\_\_\_\_.
- A) oceanic basalt
  - B) terrestrial granite
  - C) a combination of basalt and granite
  - D) mantle material
  - E) the Moho

Answer: D

Section: 02.01 Earth's Interior

Topic: Earth's Interior

Bloom's: 1. Remember

Gradable: automatic

Chapter: 02 Earth Structure and Plate Tectonics

42) The theory of drifting continents was proposed by \_\_\_\_\_.

- A) John Murray
- B) Matthew F. Maury
- C) Alfred Wegener
- D) Charles Darwin
- E) Robert Ballard

Answer: C

Section: 02.02 History of a Theory: Continental Drift

Topic: History of a Theory: Continental Drift

Bloom's: 1. Remember

Gradable: automatic

Chapter: 02 Earth Structure and Plate Tectonics

43) The mechanism causing lithospheric plates to move is thought to be \_\_\_\_\_.

- A) convection in the mantle
- B) slab pull caused by a subducting lithosphere
- C) tidal forces
- D) Earth's rotation
- E) a combination of convection in the mantle and slab pull caused by subducting lithosphere

Answer: E

Section: 02.05 Motion of the Plates

Topic: Motion of the Plates

Bloom's: 1. Remember

Gradable: automatic

Chapter: 02 Earth Structure and Plate Tectonics

44) Higher seafloor heat flow values are found \_\_\_\_\_.

- A) along coastlines
- B) in the middle of ocean basins
- C) near ocean ridge systems
- D) associated with abyssal hills
- E) along the edges of trenches

Answer: C

Section: 02.03 Evidence for a New Theory: Seafloor Spreading

Topic: Evidence for a New Theory: Seafloor Spreading

Bloom's: 1. Remember

Gradable: automatic

Chapter: 02 Earth Structure and Plate Tectonics

45) Which of the following are found along subduction zones?

- A) Oceanic trenches
- B) Active earthquake zones
- C) Island arc systems
- D) All of these are correct.
- E) None of these is correct.

Answer: D

Section: 02.04 Plate Tectonics

Topic: Plate Tectonics

Bloom's: 1. Remember

Gradable: automatic

Chapter: 02 Earth Structure and Plate Tectonics

46) Magnetic stripes on the seafloor are created at \_\_\_\_\_.

- A) subduction zones
- B) spreading centers
- C) abyssal plains
- D) subduction zones and spreading centers
- E) subduction zones, spreading centers, and abyssal plains

Answer: B

Section: 02.03 Evidence for a New Theory: Seafloor Spreading

Topic: Evidence for a New Theory: Seafloor Spreading

Bloom's: 1. Remember

Gradable: automatic

Chapter: 02 Earth Structure and Plate Tectonics

47) Plates move horizontally past each other along \_\_\_\_\_.

- A) transform faults
- B) convergent plate boundaries
- C) divergent plate boundaries
- D) the rift valley
- E) hot spots

Answer: A

Section: 02.04 Plate Tectonics

Topic: Plate Tectonics

Bloom's: 1. Remember

Gradable: automatic

Chapter: 02 Earth Structure and Plate Tectonics

48) The Pacific Plate is carrying Baja California and the coastal cities of Southern California \_\_\_\_\_ the continent of North America.

- A) away from (west)
- B) toward (east)
- C) southward along
- D) northward along
- E) None of these is correct; there is no motion in this region.

Answer: D

Section: 02.04 Plate Tectonics

Topic: Plate Tectonics

Bloom's: 1. Remember

Gradable: automatic

Chapter: 02 Earth Structure and Plate Tectonics

49) Thinning of Earth's crust and the resulting faulting is called \_\_\_\_\_.

- A) convection
- B) subduction
- C) folding
- D) rifting
- E) trailing

Answer: D

Section: 02.04 Plate Tectonics

Topic: Plate Tectonics

Bloom's: 1. Remember

Gradable: automatic

Chapter: 02 Earth Structure and Plate Tectonics

50) The deep-ocean trenches are usually associated with \_\_\_\_\_.

- A) volcanism
- B) island arc systems
- C) earthquakes
- D) All of these are correct.
- E) None of these is correct.

Answer: D

Section: 02.04 Plate Tectonics

Topic: Plate Tectonics

Bloom's: 1. Remember

Gradable: automatic

Chapter: 02 Earth Structure and Plate Tectonics

51) Seafloor spreading is continuing at a rate of approximately \_\_\_\_\_.

- A) 1 to 10 cm/year
- B) 1 to 10 m/year
- C) 1 to 10 km/year
- D) 1 to 100 cm/year
- E) 1 to 100 m/year

Answer: A

Section: 02.05 Motion of the Plates

Topic: Motion of the Plates

Bloom's: 1. Remember

Gradable: automatic

Chapter: 02 Earth Structure and Plate Tectonics

52) A fixed volcanic hot spot on Earth tends to produce a \_\_\_\_\_ on a moving plate.

- A) series of volcanic peaks
- B) high landmass with a fixed location
- C) transform fault system
- D) submarine canyon and associated abyssal hills
- E) trench

Answer: A

Section: 02.05 Motion of the Plates

Topic: Motion of the Plates

Bloom's: 1. Remember

Gradable: automatic

Chapter: 02 Earth Structure and Plate Tectonics

53) The present oceans have been created during the last \_\_\_\_\_.

- A) 2250 million years
- B) 225 million years
- C) 20 million years
- D) 2 million years
- E) 2 billion years

Answer: B

Section: 02.03 Evidence for a New Theory: Seafloor Spreading

Topic: Evidence for a New Theory: Seafloor Spreading

Bloom's: 1. Remember

Gradable: automatic

Chapter: 02 Earth Structure and Plate Tectonics

54) Which of the following occurred during the Paleozoic era?

- A) Landmasses were strung along Earth's equator.
- B) Landmasses drifted across the South Pole.
- C) Landmasses came together to form Pangaea.
- D) All of these are correct.
- E) None of these is correct.

Answer: D

Section: 02.02 History of a Theory: Continental Drift

Topic: History of a Theory: Continental Drift

Bloom's: 1. Remember

Gradable: automatic

Chapter: 02 Earth Structure and Plate Tectonics

55) A program of deep-sea drilling for cores from the ocean's bottom is carried out by the \_\_\_\_\_.

- A) Kon-Tiki
- B) Fram
- C) JOIDES Resolution
- D) Calypso
- E) Beagle

Answer: C

Section: 02.03 Evidence for a New Theory: Seafloor Spreading

Topic: Evidence for a New Theory: Seafloor Spreading

Bloom's: 1. Remember

Gradable: automatic

Chapter: 02 Earth Structure and Plate Tectonics

56) The oceans' oldest sediments are found \_\_\_\_\_.

- A) adjacent to a rift valley
- B) on top of the basalt layer, far from spreading centers
- C) adjacent to a transform fault
- D) at the surface of sediment layers, far from spreading centers
- E) in hot spots

Answer: B

Section: 02.03 Evidence for a New Theory: Seafloor Spreading

Topic: Evidence for a New Theory: Seafloor Spreading

Bloom's: 1. Remember

Gradable: automatic

Chapter: 02 Earth Structure and Plate Tectonics



57) During the next magnetic reversal, the magnetic force field surrounding Earth will shift by about \_\_\_\_\_.

- A) 45°
- B) 90°
- C) 180°
- D) 270°
- E) 360°

Answer: C

Section: 02.03 Evidence for a New Theory: Seafloor Spreading

Topic: Evidence for a New Theory: Seafloor Spreading

Bloom's: 1. Remember

Gradable: automatic

Chapter: 02 Earth Structure and Plate Tectonics

58) The motion between the two sides of a transform fault is greatest \_\_\_\_\_.

- A) outside the adjacent ridge axes
- B) north of the adjacent ridge axes
- C) between the adjacent ridge axes
- D) south of the adjacent ridge axes
- E) east or west of the adjacent ridge axes

Answer: C

Section: 02.04 Plate Tectonics

Topic: Plate Tectonics

Bloom's: 1. Remember

Gradable: automatic

Chapter: 02 Earth Structure and Plate Tectonics

59) The trailing margin of a continental landmass \_\_\_\_\_ than its leading margin.

- A) is wider
- B) shows less tectonic activity
- C) is more stable
- D) is wider and is more stable
- E) All of these choices are correct.

Answer: E

Section: 02.04 Plate Tectonics

Topic: Plate Tectonics

Bloom's: 1. Remember

Gradable: automatic

Chapter: 02 Earth Structure and Plate Tectonics

60) Which method is being used to investigate the structure of the mantle?

- A) Isostasy
- B) Measurement of seafloor heat flow
- C) Seismic tomography
- D) Subduction
- E) Radiometric dating

Answer: C

Section: 02.01 Earth's Interior

Topic: Earth's Interior

Bloom's: 1. Remember

Gradable: automatic

Chapter: 02 Earth Structure and Plate Tectonics

61) The crust and the mantle are divided into the following layers in order of increasing depth:

- A) mesosphere, lithosphere, asthenosphere
- B) asthenosphere, lithosphere, mesosphere
- C) lithosphere, mesosphere, asthenosphere
- D) lithosphere, asthenosphere, mesosphere
- E) asthenosphere, mesosphere, lithosphere

Answer: D

Section: 02.01 Earth's Interior

Topic: Earth's Interior

Bloom's: 1. Remember

Gradable: automatic

Chapter: 02 Earth Structure and Plate Tectonics

62) The east coast of the United States is an example of a(n) \_\_\_\_\_ continental margin.

- A) passive
- B) active
- C) trailing
- D) leading
- E) passive and trailing

Answer: E

Section: 02.04 Plate Tectonics

Topic: Plate Tectonics

Bloom's: 1. Remember

Gradable: automatic

Chapter: 02 Earth Structure and Plate Tectonics

63) Seafloor spreading can be detected by \_\_\_\_\_.

- A) changes in water temperature
- B) changes in water chemistry
- C) acoustic monitoring
- D) submersible observation of the seafloor
- E) All of these are correct.

Answer: E

Section: 02.03 Evidence for a New Theory: Seafloor Spreading

Topic: Evidence for a New Theory: Seafloor Spreading

Bloom's: 1. Remember

Gradable: automatic

Chapter: 02 Earth Structure and Plate Tectonics

64) Which of the Earth's layers has the greatest density?

- A) Core
- B) Mantle
- C) Crust
- D) Lithosphere
- E) Asthenosphere

Answer: A

Section: 02.01 Earth's Interior

Topic: Earth's Interior

Bloom's: 1. Remember

Gradable: automatic

Chapter: 02 Earth Structure and Plate Tectonics

65) Which layer of the Earth contains the greatest mass?

- A) Core
- B) Mantle
- C) Crust
- D) Lithosphere
- E) Asthenosphere

Answer: B

Section: 02.01 Earth's Interior

Topic: Earth's Interior

Bloom's: 1. Remember

Gradable: automatic

Chapter: 02 Earth Structure and Plate Tectonics

66) Which layer is believed to behave most like a liquid?

- A) Outer core
- B) Mantle
- C) Crust
- D) Lithosphere
- E) Inner core

Answer: A

Section: 02.01 Earth's Interior

Topic: Earth's Interior

Bloom's: 1. Remember

Gradable: automatic

Chapter: 02 Earth Structure and Plate Tectonics

67) Which statement is true about continental crust?

- A) It is composed of granitic-type rock and has a higher density than oceanic crust.
- B) It is composed of basaltic-type rock and has a higher density than oceanic crust.
- C) It is composed of granitic-type rock and has a lower density than oceanic crust.
- D) It is composed of basaltic-type rock and has a lower density than oceanic crust.
- E) It is composed of granitic-type rock and has the same density as oceanic crust.

Answer: C

Section: 02.01 Earth's Interior

Topic: Earth's Interior

Bloom's: 1. Remember

Gradable: automatic

Chapter: 02 Earth Structure and Plate Tectonics

68) When talking about plate tectonics, which of the Earth's layers comprises the plates?

- A) Crust
- B) Mantle
- C) Core
- D) Lithosphere
- E) Asthenosphere

Answer: D

Section: 02.01 Earth's Interior

Topic: Earth's Interior

Bloom's: 1. Remember

Gradable: automatic

Chapter: 02 Earth Structure and Plate Tectonics

69) What is the approximate length of the mid-ocean ridge system that extends around the globe through all of the major ocean basins?

- A) 6500,000 km
- B) 650,000 km
- C) 65,000 km
- D) 6,500 km
- E) 650 km

Answer: C

Section: 02.04 Plate Tectonics

Topic: Plate Tectonics

Bloom's: 1. Remember

Gradable: automatic

Chapter: 02 Earth Structure and Plate Tectonics

70) Volcanic activity occurs at all of the following *except* \_\_\_\_\_.

- A) convergent boundaries between two oceanic plates
- B) continental rift valleys
- C) convergent boundaries between two continental plates
- D) mid-ocean ridges
- E) convergent boundary between a continental and oceanic plate

Answer: C

Section: 02.04 Plate Tectonics

Topic: Plate Tectonics

Bloom's: 1. Remember

Gradable: automatic

Chapter: 02 Earth Structure and Plate Tectonics

71) Earthquakes occur at all of the following *except* \_\_\_\_\_.

- A) convergent boundaries between two oceanic plates
- B) continental rift valleys
- C) convergent boundaries between two continental plates
- D) mid-ocean ridges
- E) Earthquakes occur at all of the above settings

Answer: E

Section: 02.04 Plate Tectonics

Topic: Plate Tectonics

Bloom's: 1. Remember

Gradable: automatic

Chapter: 02 Earth Structure and Plate Tectonics

- 72) The density of the inner core reaches a maximum of about \_\_\_\_\_ grams/cm<sup>3</sup>.  
A) 150  
B) 70  
C) 52  
D) 31  
E) 16

Answer: E

Section: 02.01 Earth's Interior

Topic: Earth's Interior

Bloom's: 1. Remember

Gradable: automatic

Chapter: 02 Earth Structure and Plate Tectonics

- 73) List the following plates in order of largest to smallest:  
A) North American, Pacific, Australian, Caribbean, Indian  
B) Pacific, Indian, North American, Australian, Caribbean  
C) Indian, Pacific, North American, Caribbean, Australian  
D) Pacific, North American, Australian, Indian, Caribbean  
E) Pacific, Australian, North American, Indian, Caribbean

Answer: D

Section: 02.04 Plate Tectonics

Topic: Plate Tectonics

Bloom's: 1. Remember

Gradable: automatic

Chapter: 02 Earth Structure and Plate Tectonics

- 74) Throughout time, continents break apart and collide and ocean basins open and close. This cyclical process is known as the \_\_\_\_\_.  
A) Wilson cycle  
B) Wegener cycle  
C) lithospheric cycle  
D) Benioff cycle  
E) Richter cycle

Answer: A

Section: 02.06 History of the Continents

Topic: History of the Continents

Bloom's: 1. Remember

Gradable: automatic

Chapter: 02 Earth Structure and Plate Tectonics

- 75) Before Pangaea, there was an earlier supercontinent we call \_\_\_\_\_.  
A) Panthalassa  
B) Gorda  
C) Rodinia  
D) Lefse  
E) Neogenia

Answer: C  
Section: 02.06 History of the Continents  
Topic: History of the Continents  
Bloom's: 1. Remember  
Gradable: automatic  
Chapter: 02 Earth Structure and Plate Tectonics

- 76) Seismic surface waves travel at about the same speed as ocean waves.

Answer: FALSE  
Section: 02.01 Earth's Interior  
Topic: Earth's Interior  
Bloom's: 1. Remember  
Gradable: automatic  
Chapter: 02 Earth Structure and Plate Tectonics

- 77) Over 170 reversals of Earth's magnetic field have been recorded in the past 80 million years.

Answer: TRUE  
Section: 02.03 Evidence for a New Theory: Seafloor Spreading  
Topic: Evidence for a New Theory: Seafloor Spreading  
Bloom's: 1. Remember  
Gradable: automatic  
Chapter: 02 Earth Structure and Plate Tectonics

78) Why does Earth have dry land?

- A) There is not enough water to cover the surface completely.
- B) All planets of the solar system have dry land.
- C) Earth has continental crust, which rides isostatically higher than oceanic crust because it is relatively thick and less dense.
- D) The mid-ocean ridges push up the bottom of the seafloor above sea level. Eventually there will not be any ocean left.
- E) All of these are correct.

Answer: C

Section: 02.01 Earth's Interior

Topic: Earth's Interior

Bloom's: 1. Remember

Gradable: automatic

Chapter: 02 Earth Structure and Plate Tectonics

79) Evidence supporting the theory of continental drift includes \_\_\_\_\_.

- A) the fit of continental margins on opposite sides of the Atlantic Ocean
- B) the presence of similar mountain belts along continental margins across oceanic basins
- C) the distribution of fossil organisms
- D) the presence of similar glacial patterns across oceanic basins
- E) All of these are correct.

Answer: E

Section: 02.02 History of a Theory: Continental Drift

Topic: History of a Theory: Continental Drift

Bloom's: 1. Remember

Gradable: automatic

Chapter: 02 Earth Structure and Plate Tectonics

80) Fracture zones \_\_\_\_\_.

- A) are characterized by volcanism
- B) are characterized by earthquakes
- C) separate plates that move in different directions
- D) are a source of high heat flux
- E) None of these is correct.

Answer: E

Section: 02.04 Plate Tectonics

Topic: Plate Tectonics

Bloom's: 1. Remember

Gradable: automatic

Chapter: 02 Earth Structure and Plate Tectonics



81) All of the following statements apply to ocean spreading centers, *except* \_\_\_\_\_.

- A) they are part of mid-ocean ridge systems
- B) they are the location of volcanism
- C) they are characterized by deep earthquakes
- D) they are a divergent boundary
- E) they are typically shallower than surrounding abyssal plains

Answer: C

Section: 02.04 Plate Tectonics

Topic: Plate Tectonics

Bloom's: 1. Remember

Gradable: automatic

Chapter: 02 Earth Structure and Plate Tectonics

82) Oceanic-oceanic plate collision \_\_\_\_\_.

- A) results in the newer, denser oceanic plate to subduct under the older, lighter plate
- B) results in the older, denser oceanic plate to subduct under the newer, lighter plate
- C) exhibits no volcanism whatsoever
- D) exhibits no earthquakes whatsoever
- E) None of these is correct.

Answer: B

Section: 02.04 Plate Tectonics

Topic: Plate Tectonics

Bloom's: 1. Remember

Gradable: automatic

Chapter: 02 Earth Structure and Plate Tectonics

83) With increasing distance away from the mid-ocean ridge \_\_\_\_\_.

- A) the oceanic crust gets older
- B) the seafloor gets deeper
- C) the sediment layer gets thicker
- D) All of these
- E) None of these is correct.

Answer: D

Section: 02.04 Plate Tectonics

Topic: Plate Tectonics

Bloom's: 1. Remember

Gradable: automatic

Chapter: 02 Earth Structure and Plate Tectonics

84) Which of the following terms consistently describe an oceanic-continental subduction zone?

- A) Shallow to deep earthquakes, volcanism, older oceanic crust, ocean trenches
- B) Shallow to deep earthquakes, no volcanism, younger oceanic crust, ocean trenches
- C) Only shallow earthquakes, volcanism, younger oceanic crust, ocean trenches
- D) Only shallow earthquakes, volcanism, older oceanic crust, ocean trenches
- E) No earthquakes, volcanism, older oceanic crust, thick sediment

Answer: A

Section: 02.04 Plate Tectonics

Topic: Plate Tectonics

Bloom's: 1. Remember

Gradable: automatic

Chapter: 02 Earth Structure and Plate Tectonics

85) The Hawaiian Islands are \_\_\_\_\_.

- A) part of an island arc formed by a subducting plate
- B) part of an island arc formed by a passive margin
- C) part of an island chain formed by a subducting plate
- D) part of an island chain formed by a passive margin
- E) part of an island chain formed by a hot spot

Answer: E

Section: 02.05 Motion of the Plates

Topic: Motion of the Plates

Bloom's: 1. Remember

Gradable: automatic

Chapter: 02 Earth Structure and Plate Tectonics

86) A hot spot trace typically includes \_\_\_\_\_.

- A) higher islands as one moves away from the hot spot
- B) more atolls as one moves toward the hot spot
- C) more volcanism as one moves toward the hot spot
- D) older seamounts as one moves toward the hot spot
- E) an island arc

Answer: C

Section: 02.05 Motion of the Plates

Topic: Motion of the Plates

Bloom's: 1. Remember

Gradable: automatic

Chapter: 02 Earth Structure and Plate Tectonics

87) Subduction explains the fact that the oldest oceanic crust is close to 200 million years old, compared to the oldest continental rocks that are \_\_\_\_\_.

- A) 4.4 million years old
- B) 140 million years old
- C) 1.4 billion years old
- D) 4.4 billion years old
- E) 14.4 billion years old

Answer: D

Section: 02.06 History of the Continents

Topic: History of the Continents

Bloom's: 1. Remember

Gradable: automatic

Chapter: 02 Earth Structure and Plate Tectonics