

## Chapter 6 QUIZ

### Multiple Choice

Identify the choice that best completes the statement or answers the question.

- \_\_\_ 1. Stress that pushes a mass of rock in two opposite directions is called
- shearing.
  - tension.
  - compression.
  - deformation.
- \_\_\_ 2. Because stress is a force, it
- takes energy out of rock.
  - adds energy to rock.
  - adds volume to rock.
  - makes rock harder.
- \_\_\_ 3. In a normal fault, the part of the fault that lies below the other part is called the
- hanging wall.
  - reverse fault.
  - footwall.
  - anticline.
- \_\_\_ 4. Which type of stress force produces reverse faults?
- shearing
  - tension
  - compression
  - deformation
- \_\_\_ 5. The point beneath Earth's surface where rock breaks under stress and triggers an earthquake is called the
- syncline.
  - footwall.
  - epicenter.
  - focus.
- \_\_\_ 6. The type of seismic waves that arrive at the surface first and move by compressing and expanding the ground like an accordion are called
- S waves.
  - P waves.
  - Surface waves.
  - Mercalli waves.
- \_\_\_ 7. Which scale would most likely be used to tell how much earthquake damage was done to homes and other buildings?
- the Richter scale
  - the Mercalli scale
  - the moment magnitude scale
  - the seismic scale
- \_\_\_ 8. Which of the following can cause damage days or months after a large earthquake?
- the arrival of surface waves.
  - liquefaction.

- c. a tsunami.
- d. an aftershock.

- \_\_\_\_\_ 9. The best way to protect yourself in an earthquake is to
- a. run as fast as you can.
  - b. drop, cover, and hold.
  - c. go into the basement.
  - d. stand under a tree.
- \_\_\_\_\_ 10. Which of the following monitors both vertical and horizontal movements along a fault?
- a. laser-ranging device
  - b. GPS satellite system
  - c. tiltmeter
  - d. creep meter
- \_\_\_\_\_ 11. Geologists know that wherever plate movement stores energy in the rock along faults,
- a. earthquakes are not likely.
  - b. earthquakes are likely.
  - c. an earthquake is occurring.
  - d. an earthquake could never occur.
- \_\_\_\_\_ 12. A force that acts on rock to change its shape or volume is called
- a. an aftershock.
  - b. friction.
  - c. liquefaction.
  - d. stress.
- \_\_\_\_\_ 13. What happens when friction between the opposite sides of a fault is high?
- a. A plateau may form on one side of the fault.
  - b. The fault locks, and stress builds up until an earthquake occurs.
  - c. Folding of the crust may occur.
  - d. The rocks on both sides of the fault easily slide past each other.
- \_\_\_\_\_ 14. In what direction do seismic waves carry the energy of an earthquake?
- a. away from the focus
  - b. toward the focus
  - c. from the surface to the interior
  - d. through the mantle only
- \_\_\_\_\_ 15. Geologists cannot yet predict earthquakes because
- a. they have too much data.
  - b. they can't be sure when and where stress will be released along a fault.
  - c. they need to know where all past earthquakes occurred.
  - d. there are too many faults to monitor.
- \_\_\_\_\_ 16. Most earthquake-related deaths and injuries result from
- a. tsunamis.
  - b. damage to buildings or other structures.
  - c. liquefaction.
  - d. P waves.
- \_\_\_\_\_ 17. What type of earthquake wave can travel through both liquids and solids?
- a. P waves

- b. S waves
- c. focus waves
- d. surface waves

- \_\_\_ 18. The rating system that estimates the total energy released by an earthquake is called the
- a. Richter scale.
  - b. moment magnitude scale.
  - c. mechanical seismograph scale.
  - d. Mercalli scale.

**Modified True/False**

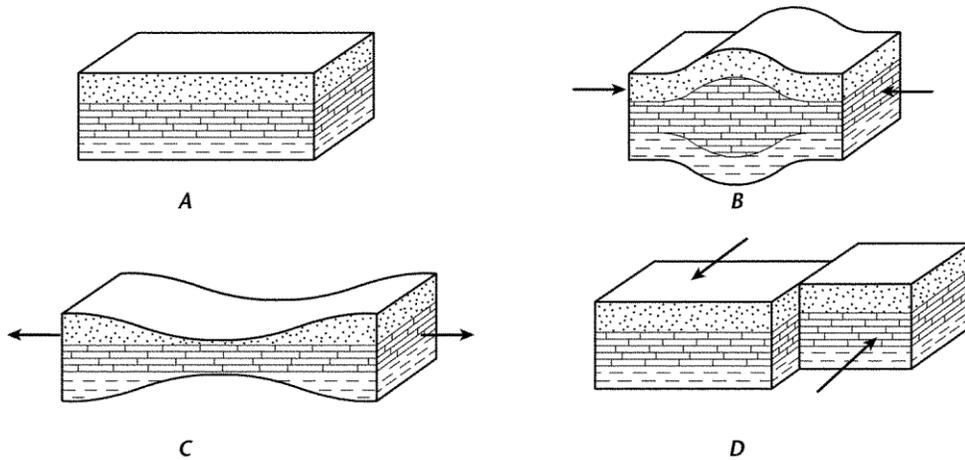
Indicate whether the statement is true or false. If false, change the identified word or phrase to make the statement true.

- \_\_\_ 19. An upward fold in a rock is called a plateau. \_\_\_\_\_
- \_\_\_ 20. The squeezing together of rocks by stress is called shearing. \_\_\_\_\_
- \_\_\_ 21. An earthquake on the ocean floor can produce a tsunami, which may grow into a huge wave as it approaches the shore. \_\_\_\_\_
- \_\_\_ 22. The Richter scale describes the effects of an earthquake on people, buildings, and land at a given location.  
\_\_\_\_\_
- \_\_\_ 23. Geologists use a creep meter to measure the horizontal movement along a fault.  
\_\_\_\_\_

**Short Answer**

Use the diagram to answer each question.

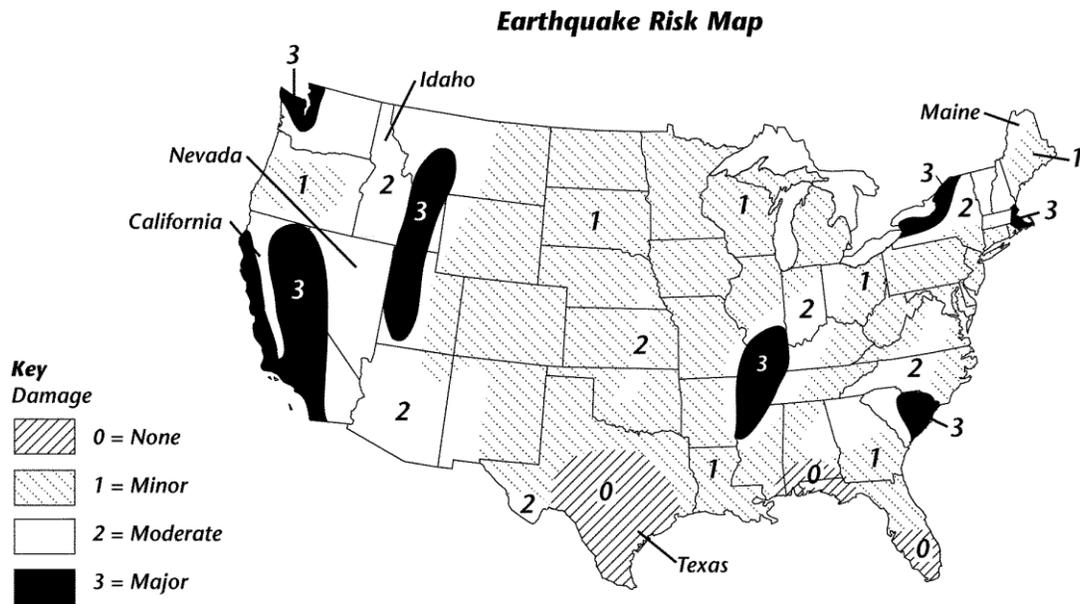
**Rock Stress**



24. Describe the rock layers shown in Diagram A and any forces acting on the rock.

25. In diagram B, which type of fault will form if the stress force continues? Explain.
26. What caused the rock layers to take on the shape shown in diagram C?
27. Contrast the plate movements that cause the stresses in diagrams B and C.
28. Will a normal fault result from the stresses being applied to the rock unit in diagram D? Explain.
29. Compare diagram B to diagram A. How is it different?

*Use the diagram to answer each question.*



30. How do California and Nevada compare in possible severity of earthquake damage?
31. In which direction does the major earthquake risk zone in Idaho run?
32. In which part of Maine should you live if you want the least possible risk of damage from an earthquake? Explain.
33. What kind of risk is shown on the map and how is this risk determined?
34. According to the map, which part of the United States is least likely to suffer earthquake damage?
35. What earthquake damage is Texas likely to suffer?