

Scantron

/ 57 questions

Volcanism

SECTION 18.1 *Volcanoes*

In your textbook, read about the anatomy of a volcano and volcanic material.

Circle the letter of the choice that best completes the statement or answers the question.

- Lava erupts through an opening in Earth's crust called a
 - vent.
 - crater.
 - caldera.
 - volcano.
- A bowl-shaped depression that forms around the vent of a volcano is a
 - magma chamber.
 - vent.
 - crater.
 - sill.
- Broad, gently sloping volcanoes with quiet eruptions are called
 - composite volcanoes.
 - cinder cones.
 - hot spots.
 - shield volcanoes.
- The most explosive volcanoes are
 - hot spots.
 - composite volcanoes.
 - cinder cones.
 - shield volcanoes.
- Most volcanoes form
 - at hot spots.
 - at plate boundaries.
 - in the middle of continents.
 - in the center of ocean plates.
- Which of the following forms when the top or side of a volcano collapses into the magma chamber?
 - dike
 - pyroclastic flow
 - caldera
 - vent
- _____ form(s) where plates move apart.
 - Hot spots
 - Divergent volcanism
 - Subduction zones
 - Convergent volcanism
- When magma reaches Earth's surface, it is called
 - a vent.
 - a pyroclastic flow.
 - lava.
 - calderas.
- Volcanoes that form far from plate boundaries are associated with
 - subduction zones.
 - divergent boundaries.
 - ocean ridges.
 - hot spots.

SECTION 18.1 *Volcanoes, continued*

In your textbook, read about types of volcanoes.

Label the diagrams as *composite volcano*, *cinder-cone volcano*, or *shield volcano*.

A.

B.

C.

10. _____



11. _____



12. _____



Identify the type or types of volcano being described as *shield volcano*, *cinder-cone volcano*, or *composite volcano*.

C.

A

B.

- _____ 13. Forms when small pieces of magma are ejected into the air then fall back to Earth and pile up around a vent
- _____ 14. Has broad, gently sloping sides and a nearly circular base
- _____ 15. Forms when layers of basaltic lava accumulate during a nonexplosive eruption
- _____ 16. Mauna Kea in Hawaii is an example.
- _____ 17. Small volcano with steep sides
- _____ 18. Forms when layers of hardened lava chunks alternate with lava
- _____ 19. Forms from lava that contains relatively small amounts of gases and silica
- _____ 20. Forms from lava that is higher in water and silica content than lava that forms shield volcanoes
- _____ 21. Fueled by magma that contains large amounts of silica, water, and gases
- _____ 22. Magma that fuels this type of volcano contains large volumes of gases but not silica and water.
- _____ 23. Potentially the most dangerous to humans and most destructive to the environment
- _____ 24. Mount St. Helens and Mount Rainier are examples.

SECTION 18.1 *Volcanoes, continued*

In your textbook, read about where volcanoes occur.

Use each of the terms below just once to complete the passage.

A. Circum-Pacific Belt

B. volcanoes

C. mantle

D. convergent

E. western

Most of the world's volcanoes form along (25) _____ plate boundaries. Slabs of oceanic crust descend into the (26) _____ and melt. The magma that forms is forced upward through the overlying plate and forms (27) _____ when it reaches Earth's surface. The (28) _____ marks the locations of most convergent boundary volcanoes. It stretches along the (29) _____ coasts of North and South America and down the eastern coast of Asia.

In your textbook, read about where volcanoes occur.

Use each of the terms below just once to complete the passage.

A. hot spots

B. divergent

C. crust

D. ocean ridges

E. Iceland

At (30) _____ plate boundaries, magma is forced upward into fractures and faults that form as plates separate or spread apart. Most of the volcanoes that form along divergent boundaries are located underwater along (31) _____. This type of volcanic activity can be observed above sea level in (32) _____, which sits atop the Mid-Atlantic Ridge.

Some volcanoes that form far from plate boundaries form over (33) _____, which are unusually hot regions of Earth's mantle. At hot spots, high-temperature plumes melt rock. The magma that forms moves upward toward the (34) _____ and melts the crust to form a volcano. As a tectonic plate moves over a hot spot, a string of volcanoes forms. The (Hawaiian Islands _____ are forming as the result of a hot spot.

SECTION 18.2 Eruptions

In your textbook, read how magma forms.

For each statement below, write *true* or *false*.

- _____ 35. Magma is a mixture of molten rock, suspended minerals, and gases.
- _____ 36. Magma forms when rocks begin to melt.
- _____ 37. Pressure decreases with depth below Earth's surface.
- _____ 38. As pressure increases, the temperature at which a dry substance melts increases.
- _____ 39. Wet minerals and rocks melt at lower temperatures than do dry minerals and rocks.

Answer the following questions.

40. Listed ³ are three factors that affect the formation of magma. Select the one that does not affect magma

A. Temperature B. Pressure C. Presence of Sulfur D. Presence of H₂O

SKIP Why isn't Earth's entire mantle liquid?

41. How does water affect the melting temperature of a mineral?

presence of water _____ the melting temperature
of minerals

A. Lowers

B. Raises

SECTION 18.2 Eruptions, continued

In your textbook, read about the types of magma.

Use each of the terms below just once to complete the passage.

- A. granite B. rhyolitic C. extrusive
 D. upper mantle E. viscosity

Magma is named after (42) _____ rocks. Basaltic magma forms when rocks in the (43) _____ melt. This magma contains small amounts of silica and has a low (44) _____. Basaltic magma fuels relatively quiet volcanic eruptions.

SECTION 18.2 Eruptions, continued

In your textbook, read about the types of magma.

Use each of the terms below just once to complete the passage.

- A. continental B. andesitic C. granite
 D. silica E. slowly

Andesitic magma forms from oceanic crust and _____ sediments.

This magma contains about 60 percent silica and has an intermediate viscosity.

(45) _____ magma fuels volcanoes with intermediate eruptions.

Rhyolitic magma forms deep beneath (46) _____ crust.

This magma has the highest (47) _____ content of the three types

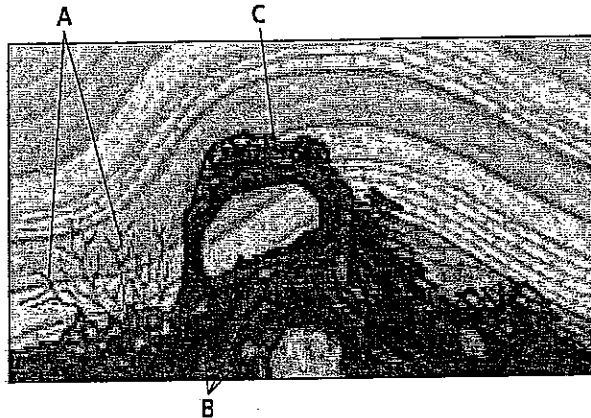
of magma. It has the same composition as (48) _____, has a high

viscosity, and flows (49) _____. _____ rhyolitic magma

produces very explosive volcanoes.

SECTION 18.3 Intrusive Activity

In your textbook, read about how magma affects surrounding rocks.
Match each letter on the diagram with its description.



- _____ 50. Magma can melt rocks with which it comes into contact.
- _____ 51. Magma can fracture apart overlying rocks and rise through cracks and fissures.
- _____ 52. Magma can cause blocks of rocks to break off, sink into the magma, and eventually melt.

In your textbook, read about plutons and tectonics.

For each item in Column A, write the letter of the matching item in Column B.

Column A

- _____ 53. Intrusive igneous rock body
- _____ 54. Largest pluton
- _____ 55. Irregularly shaped pluton that is similar to a batholith, but smaller in size
- Laccolith . Mushroom-shaped pluton
- _____ 56. Pluton that is parallel to the rocks it intrudes
- _____ 57. Pluton that cuts across preexisting rocks
- Mountain Building . Process responsible for the formation of many plutons

Column B

- a. stock
- b. sill
- laccolith
- c. pluton
- d. batholith
- e. dike
- mountain-building