Name _____

Period ___

Earth Science: Chapter 10 Study Guide

Modified True/False

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

____ 1. During a volcanic eruption, melted rock leaves the *magma chamber* and moves up the conduit. _____

____ 2. When magma leaves the vent of a volcano it is called *magma*. _____

____ 3. *Extinct* volcanoes are volcanoes that are not active now, but may become active again in the future. _____

____ 4. The two ways to make rocks melt are: *lower pressure* and added water. _____

____ 5. Rocks formed when magma cools on or below the surface are called *igneous* rocks. _____

____ 6. The volcanoes of the Hawaiian Islands are *cinder cone* volcanoes. _____

____ 7. *Pyroclastic flow* are mudflows that may accompany a stratovolcano (composite) if water is present in the ground. _____

Completion

Complete each statement.

Select the correct term to complete each sentence. There are extra terms in the list.

basalt	pillow	magma
lava	shield	cinder cone
hot spot	caldera	active
dormant	extinct	stratovolcanoes

8. When a volcano erupts, melted rock known as _____, leaves the magma chamber of the volcano.

9. When the magma leaves the vent of a volcano, it then is called _____.

10. _____ volcanoes are not active now, but may become active again in the future.

11. A _____ is a large bowl-shaped depression in a volcano.

12. A volcanic island chain is formed when a lithospheric plate moves over a _____ in the mantle.

13. Explosive eruptions and pyroclastic flow come from _____ volcanoes.

Short Answer

14. Explain the difference between active, dormant, and extinct volcanoes.

_____
_____
_____
_____

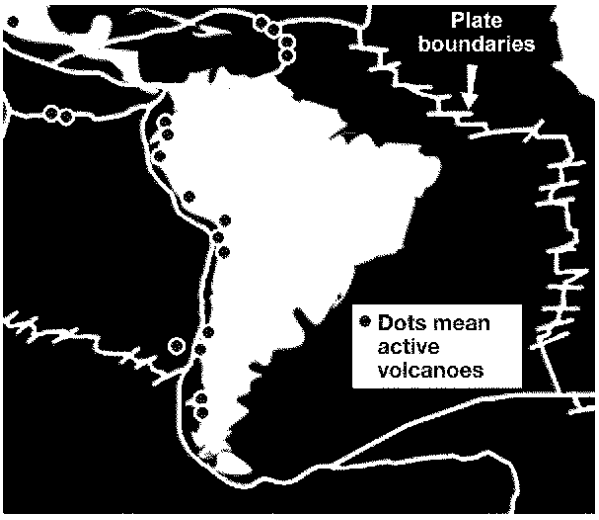
15. Explain how pressure affects a rocks ability to melt and form magma.

_____
_____
_____

16. How are igneous rocks formed? What is the main difference between igneous rocks that cool quickly and cool slowly?

_____
_____
_____

17.



South American map of active volcanoes

The map shows that a number of active volcanoes follow the western coastline of South America, but there are no volcanoes on the eastern coastline. **Explain** why.

_____
_____
_____
_____
_____
_____
_____
_____
_____

18. How does the amount of silica in magma affect the type of eruption a volcano has?

_____
_____
_____

19. Complete the table.

Type of volcano	Type of eruption
Shield	
Cinder cone	

20. Name a location where igneous rock can be found. _____

Answer Section

MODIFIED TRUE/FALSE (1 point each)

1. True
2. False, lava
3. False, Dormant
4. True
5. True
6. False, shield
7. False, Lahars

COMPLETION (1 point each)

8. magma
9. lava
10. Dormant
11. caldera
12. hot spot
13. stratovolcanoes

SHORT ANSWER

14. (1 point):
Active volcanoes are erupting or have erupted recently and are expected to erupt again in the future. Dormant volcanoes are not active now, but may become active again in the future. Extinct volcanoes are no longer able to erupt.

15. (1 point):
Rock under high pressure melts at a higher temperature. Rock that is under less pressure will melt at lower temperatures.

16. (2 points):
Igneous rocks are formed as melted rock, or magma, cools. Fast cooling produces small crystals in the rock. Slow cooling produces larger crystals in the rock.

17. (1 point):
The volcanoes on the west coast were formed by the subduction of the Nazca plate under the South American plate. This type of convergent plate boundary does not exist on the east coast of South America. This explains the lack of active volcanoes there.

18. (1 point): More silica usually results in a more explosive eruption.

19. (4 points):

Type of volcano	Type of eruption
Shield	Non-explosive or quiet
Composite	explosive
Cinder cone	Fire fountain (small bursts)

20. (1 point): As long as their answer has volcanoes in it give them the point.