<u>TEST REVIEW QUESTIONS</u> – UNIT 4 PLATE TECTONICS, EARTHQUAKES AND VOLCANOES

1. The fastest seismic waves are called P- waves.

2. Scientists are able to calculate the where the focus of the earthquake is by using the difference in arrival times between the P and S waves.

3. The epicenter is the point on the surface above the focus.

4. Earthquakes and Volcanoes occur mostly at the edges of continents. Why?

5. The breakage of rock at the focus releases energy.

6. The Richter scale measures the magnitude of an earthquake.

7. When measuring the magnitude of an earthquake, a scientist is actually measuring the seismic waves or the energy released by the EQ.

8. Convection currents are the driving force of Plate Tectonics. Explain.

9. The Phenomenon where stressed rock snaps back after an EQ to their pre-stressed condition is called the elastic rebound theory.

10. The S wave can only move through solids.

11. The P wave is a longitudinal wave which means it moves horizontally.

12. The surface waves also known as L waves are the most destructive of earthquake waves.

13. The Mercalli Scale measures the intensity of an earthquake. Explain.

14. Vocanoes form at a divergent boundary along a mid ocean ridge.

15. The forming of the Hawaiian Islands is an example of hot spots.

16. A fault is a break in the rock.

17. A divergent boundary is a boundary where the plates move apart.

18. Why does an Oceanic plate sink below a continental plate?

19. A subduction zone is where an oceanic plate dives beneath a continental plate.

20. A transform fault boundary is where most of the earthquakes take place.

21. The Mercalli Scale is observer specific, meaning it is based on the way people feel or what they observe.

22. An S-wave is a transverse wave, meaning it moves us and down.

23. Waves travel faster through material that is more dense.

24. Seismology is the study of earthquakes.

25. The damage is usually greatest near the epicenter.

26. The amount of damage caused by a earthquake depends on:

Depth of the focus

Distance from Epicenter

Building or structures located in the area

Type of Rock

27. The focus is the point under the earth where the rocks are actually breaking.

28. Most common type of volcano, making up 75% of all volcanoes, is the cinder cone.

29. A type of volcano that has gentle flows is called a shield.

30. A volcano that alternates between explosive eruptions and quiet eruptions is known as a composite volcano.

31. Three seismograph stations are needed to triangulate and find the epicenter of the earthquake.

32. Magma of shield volcanoes is rich in iron.

33. A cinder cone volcano is caused by violent eruptions due to gas trapped in the magma.

34. A composite volcano has alternating violent and mild eruptions which causes layers to form.

35. An isoseismic line is associated with the Mecalli Scale. This line indicates the level of damage felt in each area.

36. The formation of a chain of islands is formed by hot spots. Explain.

37. Trapped gasses provide the force for the volcanic eruptions.

38. Molten rock within the earth is called magma and when it erupts and comes out to the surface it is called lava.

38. The continental crust is thicker but less dense than the oceanic plates.

39. The oldest rock is found furthest from the gap at a divergent plate boundary. Why?

40. List features that occur at a subduction zone.

Mountain, volcano, and trench

41. List features that occur at a divergent boundary.

Rift valley, mid oceanic ridge and volcano