**TEST REVIEW QUESTIONS** – 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**