**NAME: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ PERIOD: \_\_\_ DATE: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**EARTHQUAKE INQUIRY QUESTIONS TEXTBOOK**

1. How are stress and strain related? (528)

2. Describe the three types of stress that act on Earth’s rocks. (528)

3. When elastic deformation occurs, what happens to the size and shape of the rock if the stress is reduced to zero? (529)

4. What happens to rock when plastic deformation occurs? (529)

5. Why does rock experience failure? (529)

6. Complete the chart below. (531)

|  |  |  |
| --- | --- | --- |
| **Types of Faults** | | |
| Type of Fault | Deacsrption of Movement | Illustration |
| Reverse |  |  |
| Normal |  |  |
| Strike-slip |  |  |

7. Complete the chart below. (532)

|  |  |  |  |
| --- | --- | --- | --- |
| **Types Seismic Waves** | | | |
| Seismic Wave Type | Travel Speed | Arrival Order | Movement of Rock |
| Primary Wave |  |  |  |
| Secondary Wave |  |  |  |
| Surface Waves |  |  |  |

8. Compare and contrast focus and epicenter. (533)

9. During an earthquake, describe the motion of the mass and pen of a seismometer in relationship to the motion of the ground. (534)

10. Draw and label a seismic wave as it would appear on a seismogram. (535)

11. How were seismologists able to determine that the Earth’s core has a liquid portion? (536)

12. When compared to an earthquake with a magnitude of 3, an earthquake with a magnitude of 4 has a seismic wave \_\_\_\_\_ times larger and a \_\_\_\_\_ fold increase in seismic energy. (539)

13. What does the moment magnitude scales measure? (540)

14. What does the modified Mercalli scale measure? (540)

15. How does the distance from the epicenter and depth of the focus affect the intensity of an earthquake? (541)

16. Why is the Mercalli scale a better way to measure an earthquake’s effect on people? (542)

17. Why is data from a minimum of 3 seismic stations needed to locate an epicenter? (542)

18. Why do the majority of earthquakes occur along the Circum-Pacific Belt and Mediterranean-Asian Belt? (544)