Earthquakes and Seismicity Self-Test: 10 questions

Special Instructions:
Using your mouse, click on the one, BEST answer. Upon completion of the exam, click the SUBMIT button, and the exam will be graded for you. You will also have the opportunity to review how well you answered each question.

1.

Earthquake A: Richter Scale = 5
Earthquake B: Richter Scale = 8

Compared to Earthquake A, Earthquake B had ____ the wave amplitude:

- 30X
- 100X
- 1,000X
- 9,000X
- 27,000X

2. Using the same data as are presented in Question #1, compared to Earthquake A, Earthquake B resulted in a release of approximately _____ more energy:

- 30X
- 100X
- 1,000X
- 9,000X
- 27,000X

3. An earthquake occurs in Japan. Seismograph stations on the opposite side of the Earth (i.e. 180 degrees away) record:

- P and S waves
- P waves, only
- S waves, only
- S and L waves
- no waves

4. The most destructive of seismic waves are:

- P waves
- S waves
- L waves

- X waves
- Z waves

5. Body waves include:

- L waves, only
- P waves, only
- S waves, only
- P and S waves
- L and S waves

6. Where is the epicenter of an earthquake relative to its focus?:

- Directly above
- Directly below
- At one and the same position
- On the opposite side of the Earth
- At either the North or South rotational pole

7. Which one of the following statements is TRUE about a seismograph station?:

- It measures Mercalli intensity.
- Only one station is required to locate an epicenter.
- They are most accurate when positioned in the shadow zone of an earthquake.
- It measures differential arrival times of P and S waves.
- Its primary purpose is to measure L waves.

8. In the shadow zone:

- both S and P waves are recorded
- neither S nor P waves are recorded
- only S waves are recorded
- only P waves are recorded
- L waves cause their greatest damage

9. S waves:

- are responsible for most of the damage from an earthquake
- travel along the Earth's surface
- are recorded in the shadow zone
- are measured to estimate an earthquake's Mercalli index
- cannot be transmitted through a liquid

10. The practical upper limit of the Richter Scale is about:

- 2
- 5.5
- 9.5
- 100
- 3560