Questions: Earthquake Science

1. How are plate boundaries and fault zones related?
2. What are the three types of faulting that occur at plate boundaries?
3. What is the most active earthquake region in the US?
4. Name other active fault zones in the continental US
5. In what type of environment do thrust faults occur?
6. In what type of environment do normal faults occur?
7. In what type of environment do strike slip faults occur?
8. How are the wavelength and frequency of waves related?
9. What do seismographs measure?
10. What is the significance of the earthquakes in the Nankai Trough near Japan?
11. Roughly how often do earthquakes recur on the southern San Andreas fault?
12. What is the difference between earthquake magnitude and intensity?
13. What are isoseismals?
14. Give an example of an isoseismal map
15. What was/is the earthquake nomogram used for?
16. What are two observational laws that describe earthquake statistics?
17. How many seismograph stations/recordings are needed to locate the epicenter of an earthquake?
18. What is the difference between the earthquake epicenter and the earthquake hypocenter?
19. What are 2 of the problems that characterize Richter magnitude?
20. What physical quantities does the seismic moment depend on?

21. What is the current most commonly used magnitude scale called?

22. What is an earthquake focal mechanism (“beachball”)?

23. What do the “nodal planes” in the focal mechanism describe?