Review Questions Topic 14: Earthquake Hazards and Prediction

What structural building feature ended up being a death trap for many during the 1994 Northridge, CA quake?

Explain the four major ways in which buildings are retrofitted to withstand earthquake shaking better

What earthquake hazard is particularly dangerous in areas with steep-sided mountains or terrane?

Explain the nature of the landslide that was triggered by the Great Alaska Earthquake

How do landslides and rockfalls exacerbate the hazardous conditions after an earthquake?

Explain how liquefaction works and how sand volcanoes are related

Give examples of how earthquake damage makes fire-fighting especially difficult

What is another "earthquake hazard" that becomes a threat only after the quake?

Explain how the Mercalli Intensity Scale works

What influences how high the numbers of the Mercalli Intensity Scale might be judged? Explain.

What does the Richter Scale fail to do accurately?

What is the relationship between magnitude and energy in both the Richter and Moment Magnitude Scale?

How is the Moment Magnitude Scale better than the Richter Scale? What additional factors does it take in to consideration?

Define: seismic zone, seismic gap, recurrence interval

What is fault creep?

Explain how recurrence intervals are calculated

Explain how old fault scarps are useful to the paleoseismologist

How are "Ghost Forests" on the West Coast indicators of past earthquake activity?

Provide four examples of methods that show potential promise in being able to "predict" earthquakes, at least within a short period of time before the quake?

Explain why the claims of "earthquake lights" and "unusual animal behavior" as earthquake predictors are suspect

How have scientists established that there is no statistical correlation between earthquake activity and local gravitational forces?