GEOL 10: Environmental Geology
Mid-Term II Study Guide

Earthquake Seismology

Can you use a time-travel curve? Can you located an earthquake? Can you determine the size of an earthquake with the Richter Nomogram? What settings cause increased ground motions (increased intensity)? What is refraction? What is the difference between earthquake magnitude and intensity? What are the first and second largest earthquakes ever recorded (when and where did they happen)? What type of plate boundaries did these 2 earthquakes occur along? What was a secondary effect of these earthquakes?

Tsunami

What causes a tsunami (how is a tsunami generated)? What plate boundaries are responsible for tsunamis? What is a travel time map (can you read one)? Can you use the shallow wave equation (in different forms, e.g. solving for C and d)? How does depth affect the velocity of tsunami waves? Why do tsunamis have smaller amplitudes in the open ocean and larger amplitudes along the coast? How are tsunami models calibrated in real time?

Volcanoes

What are some types of volcanoes and what is the primary control on their form? Which types of volcanoes are in the Cascade magmatic arc? What type of eruption formed the Columbia River Flood Basalts? When did the CRFB eruptions happen? What is a Large Igneous Province? What is an example of a LIP in North America? What are LIPs associated with? What is the most active volcano in the Cascades?