Week 2 quiz, worth 5 points
(Week 1's quiz was your questionnaire) Name _____

1. At the start of class today, John mentioned earthquakes in Italy this week. What is the style of faulting?

A. Thrust
B. Normal
C. Strike-slip
D. Explosive
E. Implosive

2. At the start of our textbook, Yeats spends pages relating

A. When he experienced an earthquake as a child
B. The sequence of events leading to the eruption of Mt St Helens volcano
C. When scientists learned that the Seattle fault underlies the city of Seattle
D. When scientists learned the Cascadia subduction zone breaks in M9 events

3. In the lab, we saw that, with earthquake early warning,

A. In the best case, we might have minutes of warning of strong shaking
B. In the best case, we might have hours warning of strong shaking
C. In the best case, we might have months warning of strong shaking

4. Which hazards are present around the Rim of Fire **(circle all that are correct)**?

A. Earthquakes
B. Volcanoes
C. Tsunamis
D. Landslides

5. How long does it take for the mantle to overturn in a convective cycle?

A. a thousand years,
B. a million years,
C. a hundred million years, or
D. ten billion years.

ESS 202 Quiz 3

Name _____

Section_____

1. Yesterday, there was a deadly earthquake in

    a. Italy
    b. Somalia
    c. Louisiana
    d. Afghanistan.

2. Draw a cross-section labeling the fault plane, hypocenter, and fault scarp.

3. What is a **wave**?

    a. A process in which material travels a long way from its starting position.
    b. A process in which material rotates around a center of mass.
    c. A disturbance that can travel far through a material even though the material moves only slightly.
    d. A change in phase of the material, such as water freezing to ice.

4. Choose the one **incorrect** statement below:

    a. P waves travel faster than S waves, which travel faster than surface waves.
    b. P waves travel faster than airplanes.
    c. S waves shake the ground more strongly than P waves.
    d. Both P waves and S waves travel through fluids, as well as solids.

5. Name the **four major layers in the Earth**, state their order in depth, and whether they are liquid or solid.

ESS 202 Quiz 4

Name _____

Section_____

6. The smallest earthquakes are about magnitude

    a. -5000
    b. -2
    c. 0
    d. 0.00001

7. The largest earthquakes are about magnitude

    a. 5
    b. 10
    c. 10,000
    d. 1 X 10^{27}

8. Which are three ways earthquake energy is spent? (One is vibrations.)

9. At which style of plate tectonic boundary are the deepest earthquakes found?

    a. convergent
    b. divergent
    c. transform

10. Estimate the intensity of shaking one would feel at the epicenter an event with magnitude

    a. 3
    b. 6
    c. 9

ESS 202 Quiz 5

Name _____

Section_____

1. Where and when was the deadliest earthquake in the United States?

2. Where and when was the most expensive earthquake in the United States?

3. Where and when was the largest magnitude earthquake that we've measured?

4. Where and when was the most expensive earthquake globally?

5. Which country fell from being a global power in the eighteenth century because of an earthquake?

ESS 202 Quiz 6 May 11

Name _____

Lab Day_____

1. What did Dr. Atwater observe to determine the exact date of the last Cascadia Megathrust earthquake.

2. When was the last Megathrust earthquake:

a) 1600
b) 1700
c) 1800
d) 1900

3. What geologic structure is most likely to generate a damaging earthquake in the Puget Sound region in your lifetime?

4. How deep are the deepest earthquakes on the planet?
a) 70 km
b) 140 km
c) 700 km
d) 1400 km

5. Which earthquake had more aftershocks
a) Northridge
b) Nisqually

ESS 202 Quiz 7 May 22

Name _____

Lab Day_____

1) What in the primary thing that Dr. Haugerud (guest speaker this week) observes to find earthquake faults in western Washington?

a) topography

b) magnetic field

c) gravity

d) seismograms

2) What causes the north-south grooves seen in the Lidar images throughout much of the Puget Sound lowlands?

a) rivers

c) glaciers

b) bulldozers

d) earthquakes

3) To make a deterministic earthquake prediction, what are the three things you need to specify about the earthquake?

a)

b)

c)

4) (2 points) The three types of plate boundaries are listed below. Circle the plate boundaries that have volcanoes associated with them. For each type that has volcanoes give the name of a specific volcano or a chain of volcanoes that is associated with that style of plate boundary.

Transform plate boundary _____

Mid-coean ridge spreading center _____

Subduction zone _____

ESS 202 Quiz 8 May 29

Name _____

Lab Day_____

1) After a big earthquake the probability of another potentially damaging earthquake is lower.

True

False

2) Ground shaking is generally stronger on sediments and soft rocks than on hard rock.

True

False

3) Damage to buildings is mostly from which kind of ground motion (circle one)

a) horizontal

b) vertical

4) Most structures such as buildings or bridges are designed to

a) prevent collapse during a big earthquakes

b) be useable after a big earthquake

5) It is common to support freeway bridges and sometimes parts of buildings on concrete columns that have steel running up and down them. These kinds of columns have, however, failed in earthquakes such as the 1971 San Fernando earthquake. What has been done to this column design to prevent them from failing during strong ground shaking?