

EPS 20: Earthquake in your backyard
Example MidTerm Questions

MidTerm I will consist of three parts:

		Recommended time
Questions 1-30:	Multiple choice, 1 point per question	30 mins (1 min per question)
Questions 31-50:	True or False, 0.5 points per question	10 mins (30 sec per question)
Question 51-52:	Short answer question, 10 points	10 mins
	Answer either 51 OR 52	

Below are a few examples of each type

Multiple choice

1. Which of the following is related to the intensity of ground shaking at a point?
 - A) distance from the fault
 - B) acceleration
 - C) soil or rock type
 - D) all of the above
2. Liquefaction is
 - A) flooding of coastal areas due to tectonic subsidence.
 - B) a quicksand-like condition arising in some wet soils during earthquakes.
 - C) flooding caused by tsunamis.
 - D) flooding caused by dam failure resulting from an earthquake.
3. Which factor is not used to identify faults?
 - A) hills and topography
 - B) offset streams
 - C) tree line
 - D) change in rock type
4. The Hayward Fault accommodates how much of the Pacific-North America plate motion?
 - A) 5%
 - B) 20%
 - C) 50%
 - D) 100%

5. The “earthquake cycle” model is based on assumptions that the rate of stress buildup on a given fault segment is constant and that
- A) a given fault segment accumulates about the same amount of strain energy before rupture each time.
 - B) the interval between successive earthquakes increases over time on each fault segment.
 - C) the rate of radon accumulation is also constant, leading to periodic rupture from gas pressure.
 - D) major earthquakes occur on large fault zones every 30 years.

True or False

6. In 1989 as in 1906, earthquake damage in San Francisco was most severe in areas underlain by fill, as in the Marina district.
7. Because they travel through the earth, body waves cause the most structural damage during earthquakes.
8. The strike and dip of a fault describe the geometry of that fault.
9. Plate Tectonics provides a framework to understand where earthquakes are likely to occur.

Short answer question. You must answer one question, there will be a choice of two.

10. Briefly describe the earthquake cycle.

(You will have about this much space to answer the question.)