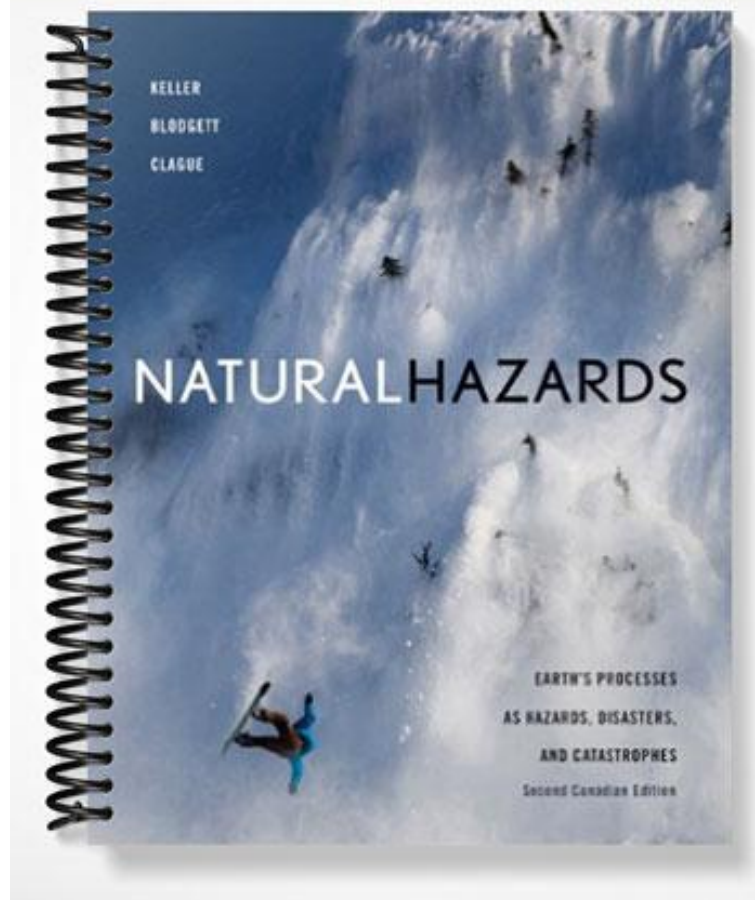


TEST BANK



Natural Hazards, 2Ce (Keller/Blodgett/Clague)
Chapter 2 Earthquakes

2.1 Multiple Choice

1) Earthquake energy

- A) radiates primarily upward from the focus.
- B) mostly travels along the fault plane.
- C) radiates outward from the focus in all directions.
- D) travels primarily downward from the focus.
- E) travels directly to Earth's surface, then radiates outward along the surface.

Answer: C

Diff: 2 Type: MC Page Ref: 34

2) The 1960 giant earthquake in Chile released approximately as much energy as

- A) a thermonuclear bomb.
- B) the United States uses in one year.
- C) the Sun emits every hour.
- D) a hurricane releases over its full life.
- E) world annual energy consumption.

Answer: B

Diff: 2 Type: MC Page Ref: 35

3) On the moment magnitude scale, a magnitude 7 earthquake releases about

- A) twice as much energy as a magnitude 6 earthquake.
- B) 10 times as much energy as a magnitude 6 earthquake.
- C) 20 times as much energy as a magnitude 6 earthquake.
- D) 30 times as much energy as a magnitude 6 earthquake.
- E) 100 times as much energy as a magnitude 6 earthquake.

Answer: D

Diff: 2 Type: MC Page Ref: 36

4) Approximately how frequently do earthquakes of magnitude 8 or greater occur?

- A) once a month
- B) once a year
- C) once every 5 years
- D) once every 10 years
- E) once every 20 years

Answer: B

Diff: 1 Type: MC Page Ref: 36

- 5) The ground motion from a magnitude 6 earthquake is approximately
- A) twice as much as ground motion from a magnitude 5 earthquake.
 - B) 10 times as much as ground motion from a magnitude 5 earthquake.
 - C) 20 times as much as ground motion from a magnitude 5 earthquake.
 - D) 30 times as much as ground motion from a magnitude 5 earthquake.
 - E) 100 times as much as ground motion from a magnitude 5 earthquake.

Answer: B

Diff: 2 Type: MC Page Ref: 36

- 6) In which major Canadian city are you most likely to experience a subduction-related earthquake?

- A) Vancouver
- B) Montreal
- C) Ottawa
- D) Halifax
- E) Toronto

Answer: A

Diff: 1 Type: MC Page Ref: 37-39

- 7) The boundary between the North American Plate and the Juan de Fuca Plate under Vancouver Island is a

- A) normal fault.
- B) strike-slip fault.
- C) transform fault.
- D) subduction zone.
- E) hanging wall.

Answer: D

Diff: 3 Type: MC Page Ref: 39

- 8) The fastest seismic waves are

- A) shear waves.
- B) secondary waves.
- C) compressional waves.
- D) Love waves.
- E) Rayleigh waves.

Answer: C

Diff: 1 Type: MC Page Ref: 41

- 9) To locate the epicentre of an earthquake, what is the minimum number of seismograms that you need (from different locations)?

- A) 1
- B) 2
- C) 3
- D) 4
- E) 5

Answer: C

Diff: 2 Type: MC Page Ref: 43-44

- 10) Mexico City is particularly susceptible to earthquake damage because
- A) most of the buildings do not meet building codes.
 - B) the city is built on ancient lake sediments, which amplify seismic shaking.
 - C) the city is built directly across a major strike-slip fault, like the San Andreas Fault.
 - D) Mexico City is built at a plate tectonic boundary.
 - E) earthquakes typically dislodge massive landslides into Mexico City from the surrounding mountains.

Answer: B

Diff: 2 Type: MC Page Ref: 47

- 11) Of the following choices, where would be the most prudent place to purchase property, to minimize risk of damage due to earthquakes?

- A) the Marina District of San Francisco
- B) downtown Mexico City
- C) west Oakland, California, on the waterfront
- D) Richmond, BC, which is built on river sediments
- E) just north of San Francisco, on bedrock

Answer: E

Diff: 2 Type: MC Page Ref: 45-47

- 12) What geologic evidence for past earthquakes could you observe in salt marshes on the coast of Washington State?

- A) measurable offsets along strike-slip faults
- B) alternating layers of tidal mud and tidal marsh deposits
- C) earthquake-triggered landslides from steep dunes
- D) uplifted rocky terraces
- E) the remains of destroyed cities

Answer: B

Diff: 3 Type: MC Page Ref: 51

- 13) The New Madrid Earthquakes are examples of

- A) intraplate earthquakes.
- B) interplate earthquakes.
- C) subduction zone earthquakes.
- D) stability earthquakes.
- E) aftershocks.

Answer: A

Diff: 1 Type: MC Page Ref: 51

14) The 1964 Alaska M 9.2 earthquake was far larger than the 1989 Loma Prieta earthquake at M 6.9, yet the Loma Prieta earthquake was far more costly, even when adjusted for inflation. Why?

- A) That area of Alaska is all bedrock whereas San Francisco is all built on loose sediments.
- B) The shaking lasted three times as long in San Francisco as it did in Alaska.
- C) Most of the shaking motion in San Francisco was vertical while in Alaska, the motion was horizontal.
- D) San Francisco is closer to sea level and large portions of the city dropped below sea level suddenly.
- E) The population and infrastructure density in Alaska was much lower than in San Francisco.

Answer: E

Diff: 2 Type: MC Page Ref: 52

15) An earthquake forecast

- A) is a prediction of when and where an earthquake will happen.
- B) predicts the magnitude of the next earthquake for a particular region.
- C) outlines the damage to human infrastructure expected in the next earthquake in a particular region.
- D) states the risk to human populations in earthquake-prone regions based on the geological materials on which most of the buildings are constructed.
- E) states the probability of an earthquake of particular magnitude occurring in an area within a specified time.

Answer: E

Diff: 3 Type: MC Page Ref: 60

16) A seismic gap is

- A) a region within a tectonic plate with no active faults.
- B) a region on the boundary of a tectonic plate with no active faults.
- C) a fault that does not produce offsets at Earth's surface.
- D) a "missing" portion of a fault that has not yet been mapped.
- E) a segment along an active fault that has not experienced seismic activity recently.

Answer: E

Diff: 2 Type: MC Page Ref: 61

17) At present, an earthquake warning system could provide up to a one minute warning to regions far enough away from the epicentre of an earthquake. Such a warning system is based on the difference between

- A) P-wave and S-wave velocities.
- B) P wave and surface wave velocities.
- C) radio wave and seismic wave velocities.
- D) sound wave and seismic wave velocities.
- E) ultrasonic wave and seismic wave velocities.

Answer: C

Diff: 3 Type: MC Page Ref: 62

18) If you're indoors and you feel shaking from an earthquake, of the following choices, where is the safest place to be?

- A) in an elevator
- B) next to a window
- C) in a doorway with a door attached to it
- D) near a tall cabinet
- E) under a table

Answer: E

Diff: 1 Type: MC Page Ref: 67

19) A section of an otherwise active fault zone that has not experienced an earthquake is

- A) a normal fault.
- B) a seismic gap.
- C) dormant.
- D) a subduction zone.
- E) a transform fault.

Answer: B

Diff: 1 Type: MC Page Ref: 61

20) In 2001, a M 6.1 earthquake hit El Salvador and a M 6.8 earthquake hit Olympia in Washington state. What other differences were there between these two quakes?

- A) The death toll was higher in Washington because of the greater magnitude.
- B) The focus was shallower in Washington.
- C) One had a significantly lower death toll, as a result of better building codes.
- D) Other than magnitude, there was no difference.
- E) In El Salvador, there was less damage because the buildings were small and light.

Answer: C

Diff: 2 Type: MC Page Ref: 33

21) The magnitude of an earthquake is a measure of

- A) the amount of ground displacement.
- B) the energy released.
- C) the duration of the earthquake.
- D) the ground displacement and the energy released.
- E) the position of the earthquake.

Answer: D

Diff: 2 Type: MC Page Ref: 36

22) The Richter scale

- A) is no longer used.
- B) is a measure of earthquake intensity.
- C) is linear.
- D) was developed in Japan.
- E) is a measure of earthquake damage.

Answer: A

Diff: 2 Type: MC Page Ref: 35

- 23) A great earthquake is one
- A) that lasts more than 5 minutes.
 - B) with magnitude 8 and greater.
 - C) that kills more than 100,000 people.
 - D) that causes a tsunami.
 - E) that has many different effects, such as landslides, liquefaction etc.

Answer: B

Diff: 2 Type: MC Page Ref: 36

- 24) The Mercalli scale
- A) is a measure of the total damage done by an earthquake.
 - B) is a measure of how people and property are affected by an earthquake.
 - C) is a measure of the amount of energy released.
 - D) is an open ended (no limit) scale.
 - E) is used to determine earthquake magnitude.

Answer: B

Diff: 2 Type: MC Page Ref: 36

- 25) Energy in the form of deformation strain energy is released during an earthquake by the process of
- A) eruption.
 - B) faulting.
 - C) subsidence.
 - D) plate tectonics.
 - E) continental drift.

Answer: B

Diff: 2 Type: MC Page Ref: 37

- 26) In a normal fault
- A) the hanging wall moves sideways past the footwall.
 - B) the hanging wall moves down relative to the footwall.
 - C) the footwall moves up relative to the hanging wall.
 - D) has no hanging wall or footwall.
 - E) is a high-angle thrust fault.

Answer: A

Diff: 2 Type: MC Page Ref: 41

- 27) Fault creep
- A) occurs only on strike-slip faults.
 - B) is gradual movement along a fault without noticeable earthquakes.
 - C) releases energy ensuring that no large earthquakes occur on the fault.
 - D) occurs only in seismic gaps.
 - E) does not cause any damage to structures.

Answer: B

Diff: 2 Type: MC Page Ref: 41

28) Compressional seismic waves are

- A) surface waves.
- B) Love waves.
- C) S waves.
- D) P waves.
- E) Rayleigh waves.

Answer: D

Diff: 2 Type: MC Page Ref: 41

29) S waves

- A) are shear waves.
- B) travel through the core.
- C) travel faster than compression waves.
- D) only occur on the Earth's surface.
- E) cannot be detected by seismographs.

Answer: A

Diff: 2 Type: MC Page Ref: 42

30) Which of the following factors affects the amount of shaking an area experiences during an earthquake?

- A) earthquake magnitude
- B) distance to the focus
- C) directivity of the rupture
- D) local rock and soil characteristics
- E) all of the above

Answer: E

Diff: 2 Type: MC Page Ref: 42

31) At any given seismograph station

- A) the S waves arrive before the P waves.
- B) the surface waves arrive first.
- C) the P waves arrive first.
- D) the P waves are always largest.
- E) distance to earthquake is determined using the size of the P waves.

Answer: C

Diff: 2 Type: MC Page Ref: 42

32) Of the seismic waves, P waves

- A) travel fastest.
- B) do the most damage.
- C) move from side to side.
- D) do not travel through the core.
- E) are shear waves.

Answer: A

Diff: 2 Type: MC Page Ref: 41

33) The process of locating the position of an earthquake using seismic records from three locations is called

- A) plate tectonics.
- B) triangulation.
- C) magnitude determination.
- D) seismology.
- E) echo location.

Answer: B

Diff: 2 Type: MC Page Ref: 42

34) When seismic waves travel from hard materials into softer ones

- A) they undergo amplification.
- B) they speed up.
- C) they cause the rocks to liquify.
- D) they change from P to S waves.
- E) they cause landslides.

Answer: A

Diff: 2 Type: MC Page Ref: 45

35) In the 1985 Mexico earthquake buildings with 10-20 storeys literally tore themselves apart because

- A) they were badly constructed.
- B) they were not finished.
- C) the rocks beneath them were hard.
- D) they had the same natural frequency as the materials on which they were built.
- E) the earthquake occurred right under the city.

Answer: D

Diff: 2 Type: MC Page Ref: 47

36) Normal fault earthquakes

- A) occur mostly at subduction zones.
- B) occur mostly at divergent plate boundaries.
- C) are commonly large.
- D) are commonly deep.
- E) occur mostly on land.

Answer: B

Diff: 2 Type: MC Page Ref: 51

37) When a building has the same natural vibration frequency as earthquake motion this causes

- A) surface waves.
- B) resonance.
- C) refraction.
- D) ground rupture.
- E) faulting.

Answer: B

Diff: 2 Type: MC Page Ref: 52

38) When water-saturated loose sediment is shaken during an earthquake

- A) it solidifies.
- B) it loses its cohesion and fails.
- C) it reduces the amount of seismic energy.
- D) it absorbs more water.
- E) it becomes stronger.

Answer: B

Diff: 2 Type: MC Page Ref: 54

39) In the 1906 San Francisco earthquake what percentage of the damage was due to the fires that were a secondary effect of the quake?

- A) 5%
- B) 10%
- C) 25%
- D) 50%
- E) 80%

Answer: E

Diff: 2 Type: MC Page Ref: 56

40) Which of the following human activities is known to cause earthquakes?

- A) dam construction
- B) draining of swampland
- C) irrigation
- D) farming
- E) mining

Answer: A

Diff: 2 Type: MC Page Ref: 57

2.2 True/False

1) The Richter scale is the most common earthquake magnitude scale used by seismologists.

Answer: FALSE

Diff: 1 Type: TF Page Ref: 35

2) Earthquake intensity describes the effects of shaking on people and structures.

Answer: TRUE

Diff: 2 Type: TF Page Ref: 35,36

3) On the moment magnitude scale, earthquake magnitude is determined by the intensity of shaking.

Answer: FALSE

Diff: 2 Type: TF Page Ref: 35

4) If you live in a house built on unconsolidated sediments, in an earthquake, you can expect to experience a higher Modified Mercalli Intensity than your neighbors whose house is built on bedrock.

Answer: TRUE

Diff: 1 Type: TF Page Ref: 36-37, 45-47

5) Movement along dip-slip faults is primarily vertical.

Answer: TRUE

Diff: 2 Type: TF Page Ref: 41

6) Blind faults cause ruptures at Earth's surface in unexpected places.

Answer: FALSE

Diff: 3 Type: TF Page Ref: 41

7) Sudden earthquakes are unlikely along faults where tectonic creep occurs.

Answer: FALSE

Diff: 3 Type: TF Page Ref: 41

8) Shear waves can travel through solids and liquids, but not through gases.

Answer: FALSE

Diff: 2 Type: TF Page Ref: 42

9) When movement occurs along a normal fault, the hanging wall drops down compared to the footwall.

Answer: TRUE

Diff: 2 Type: TF Page Ref: 40, 41

10) Vancouver Island is currently flexing upward due to the accumulation of strain along the Cascadia subduction zone.

Answer: TRUE

Diff: 3 Type: TF Page Ref: 49

11) The distribution of earthquakes on Earth is random.

Answer: FALSE

Diff: 1 Type: TF Page Ref: 39, 50

12) Horizontal shaking from earthquakes causes more damage than vertical shaking.

Answer: TRUE

Diff: 2 Type: TF Page Ref: 42

13) Most fires associated with earthquakes are started in urban areas.

Answer: TRUE

Diff: 2 Type: TF Page Ref: 55, 56

14) Long-term slip rates along most major North American faults are well-known.

Answer: FALSE

Diff: 3 Type: TF Page Ref: 59

15) Precursors, such as foreshocks, always precede large earthquakes.

Answer: FALSE

Diff: 1 Type: TF Page Ref: 61

16) Typically, earthquake tragedy in one community stimulates other communities to put more resources toward earthquake preparedness.

Answer: FALSE

Diff: 2 Type: TF Page Ref: 64

17) Earthquake focus and epicentre are the same thing.

Answer: FALSE

Diff: 2 Type: TF Page Ref: 35

18) Tectonic creep occurs on faults that move without generating earthquakes.

Answer: TRUE

Diff: 2 Type: TF Page Ref: 41

19) Shear waves move faster than surface waves.

Answer: TRUE

Diff: 2 Type: TF Page Ref: 42

20) The time lag between the arrival of the different types of seismic waves is a function of distance from the earthquake focus.

Answer: TRUE

Diff: 2 Type: TF Page Ref: 42

21) In the 1989 Loma Prieta earthquake, buildings in the Marina district experienced significant damage because they were built on landfill debris from the 1906 earthquake.

Answer: TRUE

Diff: 2 Type: TF Page Ref: 45

22) Earthquake damage in the 1985 Mexico earthquake was greatest in small (1-2 storey) buildings.

Answer: FALSE

Diff: 2 Type: TF Page Ref: 47

23) The Queen Charlotte fault off the coast of Vancouver Island is a normal fault.

Answer: FALSE

Diff: 2 Type: TF Page Ref: 49

24) Intraplate earthquakes occur at the boundary between plates.

Answer: FALSE

Diff: 1 Type: TF Page Ref: 51

25) Some human activities trigger earthquakes.

Answer: TRUE

Diff: 1 Type: TF Page Ref: 56

2.3 Short answer/Essay

1) There were no casualties from the magnitude 6.8 earthquake in Washington State in 2001, yet a magnitude 6.1 earthquake in El Salvador in 2001 killed and injured more than 3500 people.

Give a geophysical reason why the lower magnitude earthquake killed more people.

Answer: The focus of the Washington State earthquake was deep under the Earth's surface, while the focus of the El Salvador quake was shallow. More of the earthquake energy from the deep quake had attenuated by the time the seismic waves reached the surface.

Diff: 2 Type: ES Page Ref: 32-33, 42

2) List three of the four most important factors that determine the shaking people experience in an earthquake.

Answer: Distance to the focus. Earthquake magnitude. Directionality of the rupture. Local geologic conditions.

Diff: 1 Type: ES Page Ref: 42

3) Compare the motion that occurs within rocks when P waves pass through versus when S waves pass through.

Answer: As a P wave passes, the rocks undergo compression and expansion parallel to the direction of motion of the seismic wave. As an S wave passes, the rocks undergo shearing motion perpendicular to the direction of motion of the seismic wave.

Diff: 2 Type: ES Page Ref: 41, 42

4) Describe the process of liquefaction.

Answer: Shaking from an earthquake can increase the pore water pressure in unconsolidated, saturated sediments and cause suspension of the particles. When the sediments are suspended, the grains lose contact with one another; the saturated sediments lose strength and can flow.

Once the pore water pressure decreases, the sediments pack together again and regain strength.

Diff: 3 Type: ES Page Ref: 54

5) Describe evidence that would indicate sudden uplift along a rocky shoreline due to an earthquake.

Answer: Presence of wave-cut terraces above present-day sea level. Example in the textbook is from Bainbridge Island.

Diff: 3 Type: ES Page Ref: 55

6) List at least five secondary effects of earthquakes.

Answer: liquefaction, land-level change, landslides, fire, tsunami, disease.

Diff: 1 Type: ES Page Ref: 52-56

7) Describe how earthquakes can cause outbreaks of disease.

Answer: Earthquakes can disrupt public health services and can damage human infrastructure, such as water distribution systems and sewer systems, leading to a loss of sanitation. Drinking water supplies may become contaminated with disease-causing organisms. In southwestern North America, desert soils contain spores of a disease-causing fungus. Earthquake-triggered landslides can suspend large quantities of these spores in the air and cause illness.

Diff: 2 Type: ES Page Ref: 56

8) List human activities that can cause earthquakes

Answer: Building dams and flooding valleys. Injecting liquid waste deep underground. Detonating underground nuclear explosions.

Diff: 2 Type: ES Page Ref: 56-58

9) How would you determine the long-term slip rate along a particular fault?

Answer: Examine geologic deposits to identify and measure many specific offsets along a fault. Then date the offsets to estimate how much movement occurred over how much time.

Diff: 3 Type: ES Page Ref: 59-60

10) In order to be useful, what would an earthquake prediction have to include?

Answer: Time of the earthquake, to within several days, location, magnitude, and a believable scientific rationale.

Diff: 2 Type: ES Page Ref: 60-61

11) Explain how seismic gaps can help in forecasting large earthquakes.

Answer: Seismic gaps are segments of faults that have not had earthquakes for a long time, even though segments of the same fault adjacent to the gap have been seismically active. These "quiet" segments are now more likely to move than the segments that have recently been active. Observations indicate that some previous seismic gaps have been "filled" by large recent earthquakes, which supports the use of seismic gaps to forecast likely locations for future earthquakes.

Diff: 2 Type: ES Page Ref: 62-63

12) List advantages and disadvantages of microzonation with regard to earthquake hazards.

Answer: Shaking hazards can vary within small areas, so identifying the shaking hazard on small spatial scales can guide decisions about building codes and where to locate critical facilities like schools, hospitals, power plants and communications facilities. However, creating detailed maps of earthquake risk is expensive, both in time and money.

Diff: 2 Type: ES Page Ref: 65

13) What is the difference between earthquake focus and epicentre?

Answer: The earthquake focus is the point in the Earth, usually deep within the Earth, where motion first takes place on a fault. The epicentre is the point on the surface of the Earth that directly overlies the focus.

Diff: 2 Type: ES Page Ref: 34-35

14) What is meant by the directivity of an earthquake?

Answer: When a fault ruptures it doesn't do so simultaneously in all locations. It starts at a point (the focus) and proceeds along the fault, just like tearing a piece of paper. Directivity refers to the way in which rupture progresses along the fault.

Diff: 2 Type: ES Page Ref: 44-45

15) What is earthquake amplification and what causes it?

Answer: Amplification occurs when seismic vibration travels from hard rock into soft and/or water-saturated sediment the waves slow down, but the amplitude (the amount of vibration) increases.

Diff: 2 Type: ES Page Ref: 44-45

16) What is the earthquake cycle?

Answer: The earthquake cycle is an idea that explains earthquakes as the result of the build-up of elastic strain in rocks undergoing deformation. The strain is released during an earthquake and then builds again in a new cycle of strain buildup and release.

Diff: 2 Type: ES Page Ref: 47-48

17) Comment on the sentence "earthquakes are not randomly distributed over the Earth."

Answer: Earthquakes occur in areas when strain builds up due to plate tectonics. Strain mostly occurs where one plate is in contact with another. These boundaries are inherently weak and motion can occur suddenly releasing the built-up energy. Thus most earthquakes occur at the boundaries between tectonic plates.

Diff: 2 Type: ES Page Ref: 48-49

18) What are intraplate earthquakes and why are they commonly more dangerous?

Answer: Intraplate earthquakes occur within tectonic plates instead of at the plate margins (as is the case for most earthquakes). Intraplate earthquakes are rare and hard to predict and prepare for. Therefore they tend to cause greater damage.

Diff: 2 Type: ES Page Ref: 31

19) What is liquefaction and what causes it?

Answer: Intense shaking during an earthquake can cause water-saturated sediment to release the water turning the sediment into a soupy mix, which has no mechanical strength. Structures built on water-saturated sediment tend to collapse because their foundations lose cohesion.

Diff: 2 Type: ES Page Ref: 54

20) Give at least two ways in which human activities have caused or triggered earthquakes.

Answer: When dams and water reservoirs are constructed, their weight increases the load on the underlying rocks leading to movement on fractures in the rock. Water flowing into the fractures may also lubricate them causing them to move and initiating earthquakes. Pumping of fluids into the ground (to dispose of them) can also lubricate faults leading to earthquakes. Pumping water, oil, or gas out of the ground also changes the rock volume leading to earthquakes. Underground explosions (particularly nuclear explosions) can fracture the rock. Any strain in the rock will be released as an earthquake.

Diff: 2 Type: ES Page Ref: 56-58

21) What is a seismic gap?

Answer: When earthquakes occur on a fault, not all portions of the fault move. Particularly on long faults (extending for thousands of kilometers) some portions show repeated earthquake activity. Segments of the fault for which there is no record of motion are known as seismic gaps.

Diff: 2 Type: ES Page Ref: 61

22) In earthquake-prone zones like Seattle, Vancouver or Tokyo, satellite/radio earthquake warning systems could provide warnings up to one minute before shaking occurs. What use is such a short warning time?

Answer: A one minute warning would not allow for evacuation but it would be sufficient to shut down sensitive machinery or systems saving lives. A one minute warning would allow mechanics to shut down trains, shut bridge entrances, shut down nuclear power plants, etc.

Diff: 2 Type: ES Page Ref: 62-63

2.4 Essay

1) Describe how land use planning decisions can exacerbate damage from earthquakes.

Answer: Any actions that increase the landslide hazard in an earthquake-prone region will increase the potential for damage. Development on steep slopes above populated areas (e.g. El Salvador), deforestation, and road building can all contribute to increasing earthquake-triggered landslide hazards. Building in liquefaction-prone areas also will increase the hazard to human infrastructure.

Diff: 2 Type: ES Page Ref: 30-34

2) A study of liquid waste disposal deep underground in Colorado revealed that this human activity triggered earthquakes. Describe how the information gained from these observations could apply to a natural tectonic setting.

Answer: In Colorado, the liquid waste disposal increased the fluid pressure underground and caused movement along many fractures in the host rock. In subduction zones, fractures in the downgoing slab are typically filled with fluid. As compression occurs in the subduction zone, the fluid pressure could rise, ultimately causing rocks to break, allowing discharge of fluids upward, relieving the fluid pressure temporarily.

Diff: 3 Type: ES Page Ref: 57

3) For your particular living and working situation, outline an earthquake preparedness plan.

Answer: Many possibilities here, some of which will depend on what type of building you live in/work in. From the textbook, some preparation items are: learn how to shut off utilities, make sure your house or building is bolted to its foundation, repair loose roof shingles, make sure chimneys are well-braced, keep heavy and breakable objects on low shelves, secure heavy furniture to the walls, secure water heaters and other appliances to the walls, etc.

Diff: 2 Type: ES Page Ref: 66-67