Natural Hazards and Disasters 6th edition Hyndman Test Bank

SKU: 9780357851579-TEST-BANK

Natural Hazards and Disasters (6th)

ISBN 9780357851579 | Chapter 1: Natural Hazards and Disasters

Total Questions: 98

Pool 1

Multiple Choice (33)

Q1. *[Multiple Choice] · Bloom's: Understand*

People choose to live in hazardous areas for various reasons. Which is the LEAST likely reason a person in a developing country would decide to live in a hazardous area?

a) More attractive scenery is usually found at hazardous areas. ✓ correct
b) Less hazardous areas are unaffordable or unavailable.
c) The location has access to clean water.
d) The location has access to fertile land.
e) The person does not know the history of potential hazards.

Q2. *[Multiple Choice] · Bloom's: Understand*

What does it mean to say that a potential hazard is in*equilibrium*?

a) The cost of a disaster is equal to the value of developing the area.
b) There is a balance in forces that will prevent the hazard from causing a disaster.
c) The probability that a disaster will occur is equal to the probability that a disaster will not occur.
d) The probability of a disaster is constant over time.
e) There is a temporary balance in forces that prevents a disaster at the current time. ✓ correct

Q3. *[Multiple Choice] · Bloom's: Remember*

An event causes damage to life and property but does not kill or injure large numbers of people or cause extensive property damage is called a ____.

a) national disaster
b) natural disaster ✓ correct
c) natural hazard
d) natural catastrophe
e) national catastrophe

Q4. *[Multiple Choice] · Bloom's: Remember*

Which natural hazard has the highest death rate?

a) Heat ✓ correct
b) Flood
c) Hurricane
d) Cold
e) Earthquake

Q5. *[Multiple Choice] · Bloom's: Understand*

In comparison to developing countries, catastrophic natural disasters in developed countries are most likely to cause which of the following?

a) More economic damage, but less loss of life ✓ correct
b) Less economic damage, but more loss of life
c) Equal amounts of economic damage and loss of life
d) Very little economic damage or loss of life
e) An unpredictable mix of economic damage and loss of life

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Q6. *[Multiple Choice] · Bloom's: Understand*

The cost of natural disasters is primarily _____.

a) increasing steadily each year due to population growth
b) increasing steadily each year due to economic growth
c) variable from year to year due to the unpredictability of natural disasters and their effects ✓ correct
d) increasing steadily each year due to both population and economic growth
e) decreasing steadily each year due to improved forecasting and public awareness

Q7. *[Multiple Choice] · Bloom's: Understand*

The cost of natural disasters averaged over the previous 10 years has ____ due in large part to ____.

a) increased; economic growth
b) decreased; improved forecasting
c) remained constant; mitigation
d) increased; population growth ✓ correct
e) decreased; migration out of hazardous areas

Q8. *[Multiple Choice] · Bloom's: Understand*

Climate change is expected to cause an increase in the impact of ____.

a) all natural disasters except seismic events (earthquakes, volcanoes, and tsunamis) ✓ correct
b) only disasters related to extreme weather (lightning, tornadoes, and storm surge)
c) only disasters related to seismic events (earthquakes, volcanoes, and tsunamis)
d) disasters which occur on coastlines or at sea
e) all natural disasters

Q9. *[Multiple Choice] · Bloom's: Understand*

If the recurrence interval of an event is 50 years, how frequently will the recurring events occur?

a) Will occur exactly every 50 years
b) Will never occur within a 1-year time period
c) Can occur anytime, but are likely to occur within 50 years ✓ correct
d) Will never occur if there has not been an event for 50 years
e) Will only occur once during any given individual's lifetime

Q10. *[Multiple Choice] · Bloom's: Understand*

Scientific forecasts of catastrophic earthquakes can ____.

a) accurately predict the probability of the event happening somewhere in a large geographical area within a time frame of decades
b) accurately predict the time and place of the event happening in a small geographical area within a time frame of 1 year
c) estimate the probability of the event happening somewhere in a small geographical area within a time frame of 1 year
d) estimate the probability of the event happening somewhere in a large geographical area within a time frame of decades ✓ correct
e) estimate the probability of the event happening somewhere in a small geographical area within a time frame of decades

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Q11. *[Multiple Choice] · Bloom's: Remember*

A fractal is a pattern that ____.

a) is simple on a large scale but complicated on a small scale
b) looks similar on both small and large scales ✓ correct
c) is complicated on a large scale but simple on a small scale
d) is repeated continuously on a large scale
e) is repeated continuously on a small scale

Q12. *[Multiple Choice] · Bloom's: Understand*

How does the relationship between frequency and magnitude predict occurrences?

a) events of larger magnitude occur more frequently
b) events of smaller magnitude occur less frequently
c) more frequent events have a larger magnitude
d) less frequent events have a larger magnitude ✓ correct
e) the magnitude and frequency of an event are unrelated

Q13. *[Multiple Choice] · Bloom's: Understand*

What often happens when individuals or governments attempt to control dangers from natural events in one place?

a) Creates an equilibrium that prevents the danger
b) Transfers the danger to a different place ✓ correct
c) Removes an equilibrium and increases the danger
d) Controls the event so that its effect is minor
e) Violates individual rights

Q14. *[Multiple Choice] · Bloom's: Understand*

Moderate events can become unexpectedly larger disasters if ____.

a) they are cyclic events that have grown stronger with time
b) more than one type of event occurs at the same time, amplifying the effect ✓ correct
c) precursor events are detected
d) they are not cyclic events
e) insurance companies have overestimated the cost of the event

Q15. *[Multiple Choice] · Bloom's: Understand*

Which scenario is an example of a feedback effect?

a) An earthquake triggers a landslide
b) A swarm of small earthquakes is observed before a volcanic eruption
c) Melting arctic ice generates warm water, which melts more ice ✓ correct
d) A flood occurs in a populated area, causing more damage as a result
e) A storm front creates hazards from lightning and tornadoes

Q16. *[Multiple Choice] · Bloom's: Apply*

A town on the ocean has beautiful beaches that generate considerable tourist income. The effect of ocean currents and storms has reduced the width of the beach near the town center, and the government is considering several mitigation ideas. Which action would be the LEAST appropriate response?

a) Build picnic structures and parking at other beaches up and down the shore.
b) Give tax breaks to companies that develop tourist activities that do not depend on the beach.
c) Make a small increase in the hotel tax and use the money to dredge sand from offshore and build the central beach back up.
d) Build a large rock jetty that blocks the currents around the central beach. ✓ correct
e) Erect a pavilion beside the central beach to host music festivals and public events.

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Q17. *[Multiple Choice] · Bloom's: Remember*

Federal disaster assistance can be counterproductive because it ____.

a) usually supplies money only to isolated, hazard-prone areas, while most taxpayers live in areas free of hazards
b) is an intrusive restriction on the ability of insurance companies to collect premium payments
c) allows affected people to rebuild homes without following new building codes
d) only addresses immediate needs like food and water, without helping replace economic losses
e) repays losses due to natural disasters without providing an incentive to avoid future disasters ✓ correct

Q18. *[Multiple Choice] · Bloom's: Remember*

Public education plays an important role in reducing the effect of disasters by ____.

a) increasing support of federal disaster relief
b) encouraging homeowners to accept more responsibility for disaster losses than businesses
c) making the public aware of dangers they may not understand fully ✓ correct
d) teaching people about the natural hazards in many different areas of the country
e) increasing local property taxes to pay for education programs

Q19. *[Multiple Choice] · Bloom's: Understand*

In developing countries, natural disasters are a greater risk for low-income residents because they ____.

a) tare often forced to live in hazardous areas due to economic factors ✓ correct
b) are less likely to know the history of previous disasters in their region
c) are not well-educated and do not understand the danger
d) do not trust their government and disobey laws that would keep them safe
e) find danger a desirable attribute because of their cultural traditions

Q20. *[Multiple Choice] · Bloom's: Understand*

Companies cannot always offer affordable disaster insurance because ____.

a) there is very little profit that companies can make from people who have suffered losses from a disaster
b) people affected by a disaster are unlikely to remain in the area and continue to be customers
c) federal bureaucracy requires companies to spend large amounts of money recording claims in federal court
d) federal disaster relief makes people unlikely to buy enough insurance
e) the cost of an unexpected catastrophe can exceed the amount of money that a company has received from policies ✓ correct

Q21. *[Multiple Choice] · Bloom's: Remember*

Which scenario would be considered a “hard” solution for avoiding damage by natural disasters?

a) Changing building codes to require that coastal homes be built on stilts
b) Reserving hazardous areas for parkland and recreation
c) Building a levee along the banks of a river ✓ correct
d) Allowing new construction only in hazard-free zones
e) Requiring homeowners to repair damaged structures to meet stronger guidelines

Q22. *[Multiple Choice] · Bloom's: Remember*

Which statement reflects the most significant reason people in the United States decide to live in hazardous areas?

a) They believe that the government will fix any damage that occurs.
b) They know the chances of a disaster and have made an informed decision to take the risk.
c) They generally don’t understand or recognize the extent of the hazards. ✓ correct
d) They have been intentionally misled by developers.
e) They are too poor to live elsewhere.

Q23. *[Multiple Choice] · Bloom's: Remember*

What is the most crucial factor for reducing the damage caused by natural hazards?

a) Building codes
b) Human behavior ✓ correct
c) Structural designs
d) Disaster relief
e) The hazard that causes the disaster

Q24. *[Multiple Choice] · Bloom's: Remember*

When individuals or governments try to control natural hazards, the most likely result is to ____.

a) trigger a disaster
b) reduce the effect of the hazard
c) cause the hazard to move to a different location ✓ correct
d) have no effect
e) correctly control the effect

Q25. *[Multiple Choice] · Bloom's: Remember*

A natural event that kills or injures a large number of people or causes extensive property damage is defined as a _____.

a) catastrophe ✓ correct
b) disaster
c) hazard
d) precursor
e) process

Q26. *[Multiple Choice] · Bloom's: Remember*

What is the term for a natural process that poses a threat to life and property?

a) Natural catastrophe
b) Natural disaster
c) Natural hazard ✓ correct
d) Natural precursor
e) Natural process

Q27. *[Multiple Choice] · Bloom's: Remember*

An event that occurs at predictable intervals is described as a(n) _____.

a) recurrence event
b) cyclic event ✓ correct
c) interval event
d) precursor event
e) feedback event

Q28. *[Multiple Choice] · Bloom's: Remember*

What kind of effect will change in a way that causes a rapid increase in the rate of subsequent change of a natural process?

a) Feedback ✓ correct
b) Interval
c) Hazard
d) Precursor
e) Cyclic

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Q29. *[Multiple Choice] · Bloom's: Remember*

A cyclical event will occur regularly at times determined by the _____.

a) feedback interval
b) frequency interval
c) recurrence interval ✓ correct
d) magnitude interval
e) process interval

Q30. *[Multiple Choice] · Bloom's: Remember*

What is the term for a small event that typically occurs before a major event?

a) Catastrophe
b) Disaster
c) Hazard
d) Precursor ✓ correct
e) Process

Q31. *[Multiple Choice] · Bloom's: Remember*

What is the term for the preparation efforts for reducing the damage caused by a disaster?

a) Mitigation ✓ correct
b) Cyclic
c) Hazard
d) Precursor
e) Process

Q32. *[Multiple Choice] · Bloom's: Remember*

What is evaluated by insurance companies by assessing the recurrence interval and expected costs of an event?

a) Risk ✓ correct
b) Magnitude
c) Hazard
d) Frequency
e) Process

Q33. *[Multiple Choice] · Bloom's: Remember*

Which federal agency is responsible for disaster relief?

a) EPA
b) CDC
c) FEMA ✓ correct
d) FDA
e) USGS

True/False (11)

Q34. *[True/False] · Bloom's: Remember*

Some natural catastrophe experts say people have chosen to live in “idiot zone.”

a) true ✓ correct
b) false

Correct answer: True

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Q35. *[True/False] · Bloom's: Remember*

Insurance serves as a means to reduce the financial repercussions of a disaster post-occurrence.

a) true ✓ correct
b) false

Correct answer: True

Q36. *[True/False] · Bloom's: Remember*

Climate change is expected to increase the magnitude and frequency of natural disasters.

a) true ✓ correct
b) false

Correct answer: True

Q37. *[True/False] · Bloom's: Remember*

The magnitude of a natural disaster is inversely proportional to the frequency of the event.

a) true ✓ correct
b) false

Correct answer: True

Q38. *[True/False] · Bloom's: Remember*

All natural disasters have detectable precursor events.

a) true
b) false ✓ correct

Correct answer: False

Q39. *[True/False] · Bloom's: Remember*

Land-use restrictions to avoid disaster costs are often easy to implement.

a) true
b) false ✓ correct

Correct answer: False

Q40. *[True/False] · Bloom's: Remember*

Developers and private individuals often oppose land-use restrictions that prevent use of hazardous areas.

a) true ✓ correct
b) false

Correct answer: True

Q41. *[True/False] · Bloom's: Remember*

Low-income families are more likely to be victims of natural disasters if they live in developing, but not developed countries.

a) true
b) false ✓ correct

Correct answer: False

Q42. *[True/False] · Bloom's: Remember*

Insurance covers all known types of natural hazards.

a) true
b) false ✓ correct

Correct answer: False

Q43. *[True/False] · Bloom's: Remember*

Efforts to control natural hazards are usually successful.

a) true

b) false ✓ correct

Correct answer: False

Q44. *[True/False] · Bloom's: Remember*

Landslide disaster is covered by insurance companies.

a) true

b) false ✓ correct

Correct answer: False

Essay (5)

Q45. *[Essay] · Bloom's: Analyze*

Consider Figure 1-11 from the text.

A researcher is working on plotting the recurrence interval to help predict future events. Based on Figure 11-1, would you suggest a linear scale or a log scale and why?

Suggested answer: *The researcher should plot using a log scale. When plotted on a log scale the results often fall along a straight line that can be extrapolated to larger possible future events.*

Q46. *[Essay] · Bloom's: Apply*

Suppose a professor teaching from your textbook makes the comment that “The media responds to what is sensational, and typically pays more attention to the least deadly natural disasters.” Consider what you have learned about the number of deaths associated with different types of disasters, and explain what the professor means by the statement.

Suggested answer: *Disasters like volcanoes, earthquakes, and hurricanes are sensational in the sense that they are sudden, dramatic events with strong imagery. These disasters represent a small percentage of deaths from natural hazards. The deadliest natural disasters include drought and winter weather. These disasters occur over a long time and do not have a “sensational” sense of drama and imagery.*

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Q47. *[Essay] · Bloom's: Apply*

Mangrove trees grow in inlets and lagoons along the U.S. coastline from the Texas Gulf coast to the Florida Atlantic coast. These trees extend wide networks of roots in shallow water and play a major role in reducing damage due to storm surges. Mangroves grow in the form of large shrub-like trees, about 10 feet tall. The area inside a grove cannot be easily navigated on foot and generally smells unpleasant due to decaying marine life and plants.

Cutting or damaging mangrove trees is illegal in most areas without special permission, and this fact is advertised with large educational signs at key sites, including public boat ramps and nature areas. Businesses and homes can be built behind a grove of mangrove trees as long as the trees are not disturbed. Studies clearly show that the presence of mangroves reduces the damage done during hurricanes and tropical storms.

Briefly describe how this situation involves land-use planning, insurance, the role of government, and public education in positive ways.

Suggested answer: *The government is acting fairly to keep the mitigating effect of the mangrove trees without otherwise restricting the way the adjacent land is used. This is fair since it reduces danger to a large population without unfairly restricting the use of the land behind the barrier.*

Businesses which need open access to water will have to apply for special permits or locate elsewhere. Local land-use planners can evaluate whether a request to clear mangroves from an area is worth the increased danger. Planners can also designate areas where mangroves do not grow as sites of marinas or other businesses that require access to water.

The placement of signs in many areas explains to the general public why the trees are important, even though they are not a pleasant place to walk and have an unpleasant smell. The public is more likely to support protection of mangroves when they understand their importance in preventing damage from hurricanes.

Insurance companies will understand that properties protected by mangroves can be expected to suffer less loss in a disaster. The companies may encourage the government efforts or offer better rates to businesses and homes in protected areas. They will also benefit by having a lower chance of a disaster reaching an unexpected cost.

Q48. *[Essay] · Bloom's: Apply*

A watercourse named “Buffalo Bayou” runs through the city of Houston, Texas, from east to west, passing through residential and industrial areas and the edge of the tall buildings of downtown. In the residential area, the Bayou is surrounded by a wide park, and the level of the water is typically 20 feet below the level of the streets around it. The river has overflowed its banks and caused ground-floor damage to residences nearby, most recently in 1999 and 2015. The bayou has flooded 10 times in the last century.

You are an insurance adjuster and have just paid a claim for $20,000 (the maximum allowed in the policy) for a homeowner’s loss. The homeowner is upset and says “My flood premium has been $2,000 since the flood of 1999, and now you’re paying me only $20,000 back? I think my premium is too high!”

Explain to the homeowner why the premium is appropriate.

Suggested answer: *The last flood event was 16 years ago, but on average the Bayou floods every 10 years. The time between floods is unpredictable, as they do not occur regularly. On the average, the company may have to pay the homeowner $20,000 every 10 years, and the $2,000 premium is based on that. It’s possible that the Bayou will flood next year, and the company will have paid more than the homeowner has paid in premiums.*

Q49. *[Essay] · Bloom's: Apply*

You have been hired by a major national firm with offices in all American metropolitan areas. To encourage diversity, the firm believes that new employees should spend their first year in an office in a region in which they have never lived.

Which city would you choose and why? What natural hazards will you need to be mindful of? How will you make an intelligent choice of how and where to live based on the positive qualities of the area and the possibility that you may encounter a natural disaster?

Suggested answer: *Here is a sample response:*
I've always wanted to live in San Francisco, but the danger of earthquakes is very high. Even though the damage due to earthquakes is low, a quake in the city would be very dangerous. I will pick Sacramento, where the danger of a catastrophic earthquake is lower, but still be close enough to visit the city often.

"I would live in Phoenix, since my father's family is from there. Drought and heat will be my biggest concerns. I should make sure that I have a way of storing water for drinking in a long drought, and maybe choose a house that is designed to be cool without always using the air conditioner. I should definitely learn about any other steps I should take to avoid problems."

A successful answer must:
- connect a city with a hazard reasonable for the area.
- present at least one clear way of mitigating the effect of the disaster, and
- demonstrate that the student is proposing a reasonable balance between positive factors and the type and scope of disaster.

Pool 2

Multiple Choice (33)

Q50. *[Multiple Choice] · Bloom's: Understand*

People choose to live in hazardous areas for various reasons. Which is the LEAST likely reason a person in a developing country would decide to live in a hazardous area?

a) More attractive scenery is usually found at hazardous areas. ✓ correct
b) Less hazardous areas are unaffordable or unavailable.
c) The location has access to clean water.
d) The location has access to fertile land.
e) The person does not know the history of potential hazards.

Q51. *[Multiple Choice] · Bloom's: Understand*

What does it mean to say that a potential hazard is in *equilibrium*?

a) The cost of a disaster is equal to the value of developing the area.
b) There is a balance in forces that will prevent the hazard from causing a disaster.
c) The probability that a disaster will occur is equal to the probability that a disaster will not occur.
d) The probability of a disaster is constant over time.
e) There is a temporary balance in forces that prevents a disaster at the current time. ✓ correct

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Q52. *[Multiple Choice] · Bloom's: Remember*

An event causes damage to life and property but does not kill or injure large numbers of people or cause extensive property damage is called a ____.

a) national disaster
b) natural disaster ✓ correct
c) natural hazard
d) natural catastrophe
e) national catastrophe

Q53. *[Multiple Choice] · Bloom's: Remember*

Which natural hazard has the highest death rate?

a) Heat ✓ correct
b) Flood
c) Hurricane
d) Cold
e) Earthquake

Q54. *[Multiple Choice] · Bloom's: Understand*

In comparison to developing countries, catastrophic natural disasters in developed countries are most likely to cause which of the following?

a) More economic damage, but less loss of life ✓ correct
b) Less economic damage, but more loss of life
c) Equal amounts of economic damage and loss of life
d) Very little economic damage or loss of life
e) An unpredictable mix of economic damage and loss of life

Q55. *[Multiple Choice] · Bloom's: Understand*

The cost of natural disasters is primarily _____.

a) increasing steadily each year due to population growth
b) increasing steadily each year due to economic growth
c) variable from year to year due to the unpredictability of natural disasters and their effects ✓ correct
d) increasing steadily each year due to both population and economic growth
e) decreasing steadily each year due to improved forecasting and public awareness

Q56. *[Multiple Choice] · Bloom's: Understand*

The cost of natural disasters averaged over the previous 10 years has ____ due in large part to ____.

a) increased; economic growth
b) decreased; improved forecasting
c) remained constant; mitigation
d) increased; population growth ✓ correct
e) decreased; migration out of hazardous areas

Q57. *[Multiple Choice] · Bloom's: Understand*

Climate change is expected to cause an increase in the impact of ____.

a) all natural disasters except seismic events (earthquakes, volcanoes, and tsunamis) ✓ correct
b) only disasters related to extreme weather (lightning, tornadoes, and storm surge)
c) only disasters related to seismic events (earthquakes, volcanoes, and tsunamis)
d) disasters which occur on coastlines or at sea
e) all natural disasters

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Q58. *[Multiple Choice] · Bloom's: Understand*

If the recurrence interval of an event is 50 years, how frequently will the recurring events occur?

a) Will occur exactly every 50 years
b) Will never occur within a 1-year time period
c) Can occur anytime, but are likely to occur within 50 years ✓ correct
d) Will never occur if there has not been an event for 50 years
e) Will only occur once during any given individual's lifetime

Q59. *[Multiple Choice] · Bloom's: Understand*

Scientific forecasts of catastrophic earthquakes can ____.

a) accurately predict the probability of the event happening somewhere in a large geographical area within a time frame of decades
b) accurately predict the time and place of the event happening in a small geographical area within a time frame of 1 year
c) estimate the probability of the event happening somewhere in a small geographical area within a time frame of 1 year
d) estimate the probability of the event happening somewhere in a large geographical area within a time frame of decades ✓ correct
e) estimate the probability of the event happening somewhere in a small geographical area within a time frame of decades

Q60. *[Multiple Choice] · Bloom's: Remember*

A fractal is a pattern that ____.

a) is simple on a large scale but complicated on a small scale
b) looks similar on both small and large scales ✓ correct
c) is complicated on a large scale but simple on a small scale
d) is repeated continuously on a large scale
e) is repeated continuously on a small scale

Q61. *[Multiple Choice] · Bloom's: Understand*

How does the relationship between frequency and magnitude predict occurrences?

a) events of larger magnitude occur more frequently
b) events of smaller magnitude occur less frequently
c) more frequent events have a larger magnitude
d) less frequent events have a larger magnitude ✓ correct
e) the magnitude and frequency of an event are unrelated

Q62. *[Multiple Choice] · Bloom's: Understand*

What often happens when individuals or governments attempt to control dangers from natural events in one place?

a) Creates an equilibrium that prevents the danger
b) Transfers the danger to a different place ✓ correct
c) Removes an equilibrium and increases the danger
d) Controls the event so that its effect is minor
e) Violates individual rights

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Q63. *[Multiple Choice] · Bloom's: Understand*

Moderate events can become unexpectedly larger disasters if ____.

a) they are cyclic events that have grown stronger with time

b) more than one type of event occurs at the same time, amplifying the effect ✓ correct

c) precursor events are detected

d) they are not cyclic events

e) insurance companies have overestimated the cost of the event

Q64. *[Multiple Choice] · Bloom's: Understand*

Which scenario is an example of a feedback effect?

a) An earthquake triggers a landslide

b) A swarm of small earthquakes is observed before a volcanic eruption

c) Melting arctic ice generates warm water, which melts more ice ✓ correct

d) A flood occurs in a populated area, causing more damage as a result

e) A storm front creates hazards from lightning and tornadoes

Q65. *[Multiple Choice] · Bloom's: Apply*

A town on the ocean has beautiful beaches that generate considerable tourist income. The effect of ocean currents and storms has reduced the width of the beach near the town center, and the government is considering several mitigation ideas. Which action would be the LEAST appropriate response?

a) Build picnic structures and parking at other beaches up and down the shore.

b) Give tax breaks to companies that develop tourist activities that do not depend on the beach.

c) Make a small increase in the hotel tax and use the money to dredge sand from offshore and build the central beach back up.

d) Build a large rock jetty that blocks the currents around the central beach. ✓ correct

e) Erect a pavilion beside the central beach to host music festivals and public events.

Q66. *[Multiple Choice] · Bloom's: Remember*

Federal disaster assistance can be counterproductive because it ____.

a) usually supplies money only to isolated, hazard-prone areas, while most taxpayers live in areas free of hazards

b) is an intrusive restriction on the ability of insurance companies to collect premium payments

c) allows affected people to rebuild homes without following new building codes

d) only addresses immediate needs like food and water, without helping replace economic losses

e) repays losses due to natural disasters without providing an incentive to avoid future disasters ✓ correct

Q67. *[Multiple Choice] · Bloom's: Remember*

Public education plays an important role in reducing the effect of disasters by ____.

a) increasing support of federal disaster relief

b) encouraging homeowners to accept more responsibility for disaster losses than businesses

c) making the public aware of dangers they may not understand fully ✓ correct

d) teaching people about the natural hazards in many different areas of the country

e) increasing local property taxes to pay for education programs

Q68. *[Multiple Choice] · Bloom's: Understand*

In developing countries, natural disasters are a greater risk for low-income residents because they ____.

a) tare often forced to live in hazardous areas due to economic factors ✓ correct

b) are less likely to know the history of previous disasters in their region

c) are not well-educated and do not understand the danger

d) do not trust their government and disobey laws that would keep them safe

e) find danger a desirable attribute because of their cultural traditions

Q69. *[Multiple Choice] · Bloom's: Understand*

Companies cannot always offer affordable disaster insurance because ____.

a) there is very little profit that companies can make from people who have suffered losses from a disaster
b) people affected by a disaster are unlikely to remain in the area and continue to be customers
c) federal bureaucracy requires companies to spend large amounts of money recording claims in federal court
d) federal disaster relief makes people unlikely to buy enough insurance
e) the cost of an unexpected catastrophe can exceed the amount of money that a company has received from policies ✓ correct

Q70. *[Multiple Choice] · Bloom's: Remember*

Which scenario would be considered a “hard” solution for avoiding damage by natural disasters?

a) Changing building codes to require that coastal homes be built on stilts
b) Reserving hazardous areas for parkland and recreation
c) Building a levee along the banks of a river ✓ correct
d) Allowing new construction only in hazard-free zones
e) Requiring homeowners to repair damaged structures to meet stronger guidelines

Q71. *[Multiple Choice] · Bloom's: Remember*

Which statement reflects the most significant reason people in the United States decide to live in hazardous areas?

a) They believe that the government will fix any damage that occurs.
b) They know the chances of a disaster and have made an informed decision to take the risk.
c) They generally don’t understand or recognize the extent of the hazards. ✓ correct
d) They have been intentionally misled by developers.
e) They are too poor to live elsewhere.

Q72. *[Multiple Choice] · Bloom's: Remember*

What is the most crucial factor for reducing the damage caused by natural hazards?

a) Building codes
b) Human behavior ✓ correct
c) Structural designs
d) Disaster relief
e) The hazard that causes the disaster

Q73. *[Multiple Choice] · Bloom's: Remember*

When individuals or governments try to control natural hazards, the most likely result is to ____.

a) trigger a disaster
b) reduce the effect of the hazard
c) cause the hazard to move to a different location ✓ correct
d) have no effect
e) correctly control the effect

Q74. *[Multiple Choice] · Bloom's: Remember*

A natural event that kills or injures a large number of people or causes extensive property damage is defined as a _____.

a) catastrophe ✓ correct
b) disaster
c) hazard
d) precursor
e) process

Q75. *[Multiple Choice] · Bloom's: Remember*

What is the term for a natural process that poses a threat to life and property?

a) Natural catastrophe
b) Natural disaster
c) Natural hazard ✓ correct
d) Natural precursor
e) Natural process

Q76. *[Multiple Choice] · Bloom's: Remember*

An event that occurs at predictable intervals is described as a(n) _____.

a) recurrence event
b) cyclic event ✓ correct
c) interval event
d) precursor event
e) feedback event

Q77. *[Multiple Choice] · Bloom's: Remember*

What kind of effect will change in a way that causes a rapid increase in the rate of subsequent change of a natural process?

a) Feedback ✓ correct
b) Interval
c) Hazard
d) Precursor
e) Cyclic

Q78. *[Multiple Choice] · Bloom's: Remember*

A cyclical event will occur regularly at times determined by the _____.

a) feedback interval
b) frequency interval
c) recurrence interval ✓ correct
d) magnitude interval
e) process interval

Q79. *[Multiple Choice] · Bloom's: Remember*

What is the term for a small event that typically occurs before a major event?

a) Catastrophe
b) Disaster
c) Hazard
d) Precursor ✓ correct
e) Process

Q80. *[Multiple Choice] · Bloom's: Remember*

What is the term for the preparation efforts for reducing the damage caused by a disaster?

a) Mitigation ✓ correct
b) Cyclic
c) Hazard
d) Precursor
e) Process

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Q81. *[Multiple Choice] · Bloom's: Remember*

What is evaluated by insurance companies by assessing the recurrence interval and expected costs of an event?

a) Risk ✓ correct
b) Magnitude
c) Hazard
d) Frequency
e) Process

Q82. *[Multiple Choice] · Bloom's: Remember*

Which federal agency is responsible for disaster relief?

a) EPA
b) CDC
c) FEMA ✓ correct
d) FDA
e) USGS

True/False (11)

Q83. *[True/False] · Bloom's: Remember*

Some natural catastrophe experts say people have chosen to live in “idiot zone.”

a) true ✓ correct
b) false

Correct answer: True

Q84. *[True/False] · Bloom's: Remember*

Insurance serves as a means to reduce the financial repercussions of a disaster post-occurrence.

a) true ✓ correct
b) false

Correct answer: True

Q85. *[True/False] · Bloom's: Remember*

Climate change is expected to increase the magnitude and frequency of natural disasters.

a) true ✓ correct
b) false

Correct answer: True

Q86. *[True/False] · Bloom's: Remember*

The magnitude of a natural disaster is inversely proportional to the frequency of the event.

a) true ✓ correct
b) false

Correct answer: True

Q87. *[True/False] · Bloom's: Remember*

All natural disasters have detectable precursor events.

a) true
b) false ✓ correct

Correct answer: False

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Q88. *[True/False] · Bloom's: Remember*

Land-use restrictions to avoid disaster costs are often easy to implement.

a) true

b) false ✓ correct

Correct answer: False

Q89. *[True/False] · Bloom's: Remember*

Developers and private individuals often oppose land-use restrictions that prevent use of hazardous areas.

a) true ✓ correct

b) false

Correct answer: True

Q90. *[True/False] · Bloom's: Remember*

Low-income families are more likely to be victims of natural disasters if they live in developing, but not developed countries.

a) true

b) false ✓ correct

Correct answer: False

Q91. *[True/False] · Bloom's: Remember*

Insurance covers all known types of natural hazards.

a) true

b) false ✓ correct

Correct answer: False

Q92. *[True/False] · Bloom's: Remember*

Efforts to control natural hazards are usually successful.

a) true

b) false ✓ correct

Correct answer: False

Q93. *[True/False] · Bloom's: Remember*

Landslide disaster is covered by insurance companies.

a) true

b) false ✓ correct

Correct answer: False

Essay (5)

Q94. *[Essay] · Bloom's: Analyze*

Consider Figure 1-11 from the text.

A researcher is working on plotting the recurrence interval to help predict future events. Based on Figure 11-1, would you suggest a linear scale or a log scale and why?

Suggested answer: *The researcher should plot using a log scale. When plotted on a log scale the results often fall along a straight line that can be extrapolated to larger possible future events.*

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Q95. *[Essay] · Bloom's: Apply*

Suppose a professor teaching from your textbook makes the comment that “The media responds to what is sensational, and typically pays more attention to the least deadly natural disasters.” Consider what you have learned about the number of deaths associated with different types of disasters, and explain what the professor means by the statement.

> ***Suggested answer:*** *Disasters like volcanoes, earthquakes, and hurricanes are sensational in the sense that they are sudden, dramatic events with strong imagery. These disasters represent a small percentage of deaths from natural hazards. The deadliest natural disasters include drought and winter weather. These disasters occur over a long time and do not have a “sensational” sense of drama and imagery.*

Q96. *[Essay] · Bloom's: Apply*

Mangrove trees grow in inlets and lagoons along the U.S. coastline from the Texas Gulf coast to the Florida Atlantic coast. These trees extend wide networks of roots in shallow water and play a major role in reducing damage due to storm surges. Mangroves grow in the form of large shrub-like trees, about 10 feet tall. The area inside a grove cannot be easily navigated on foot and generally smells unpleasant due to decaying marine life and plants.

Cutting or damaging mangrove trees is illegal in most areas without special permission, and this fact is advertised with large educational signs at key sites, including public boat ramps and nature areas. Businesses and homes can be built behind a grove of mangrove trees as long as the trees are not disturbed. Studies clearly show that the presence of mangroves reduces the damage done during hurricanes and tropical storms.
Briefly describe how this situation involves land-use planning, insurance, the role of government, and public education in positive ways.

> ***Suggested answer:*** *The government is acting fairly to keep the mitigating effect of the mangrove trees without otherwise restricting the way the adjacent land is used. This is fair since it reduces danger to a large population without unfairly restricting the use of the land behind the barrier.*
>
> *Businesses which need open access to water will have to apply for special permits or locate elsewhere. Local land-use planners can evaluate whether a request to clear mangroves from an area is worth the increased danger. Planners can also designate areas where mangroves do not grow as sites of marinas or other businesses that require access to water.*
>
> *The placement of signs in many areas explains to the general public why the trees are important, even though they are not a pleasant place to walk and have an unpleasant smell. The public is more likely to support protection of mangroves when they understand their importance in preventing damage from hurricanes.*
>
> *Insurance companies will understand that properties protected by mangroves can be expected to suffer less loss in a disaster. The companies may encourage the government efforts or offer better rates to businesses and homes in protected areas. They will also benefit by having a lower chance of a disaster reaching an unexpected cost.*

Q97. *[Essay] · Bloom's: Apply*

A watercourse named “Buffalo Bayou” runs through the city of Houston, Texas, from east to west, passing through residential and industrial areas and the edge of the tall buildings of downtown. In the residential area, the Bayou is surrounded by a wide park, and the level of the water is typically 20 feet below the level of the streets around it. The river has overflowed its banks and caused ground-floor damage to residences nearby, most recently in 1999 and 2015. The bayou has flooded 10 times in the last century.

You are an insurance adjuster and have just paid a claim for $20,000 (the maximum allowed in the policy) for a homeowner’s loss. The homeowner is upset and says “My flood premium has been $2,000 since the flood of 1999, and now you’re paying me only $20,000 back? I think my premium is too high!”

Explain to the homeowner why the premium is appropriate.

Suggested answer: *The last flood event was 16 years ago, but on average the Bayou floods every 10 years. The time between floods is unpredictable, as they do not occur regularly. On the average, the company may have to pay the homeowner $20,000 every 10 years, and the $2,000 premium is based on that. It’s possible that the Bayou will flood next year, and the company will have paid more than the homeowner has paid in premiums.*

Q98. *[Essay] · Bloom's: Apply*

You have been hired by a major national firm with offices in all American metropolitan areas. To encourage diversity, the firm believes that new employees should spend their first year in an office in a region in which they have never lived.

Which city would you choose and why? What natural hazards will you need to be mindful of? How will you make an intelligent choice of how and where to live based on the positive qualities of the area and the possibility that you may encounter a natural disaster?

Suggested answer: *Here is a sample response:*
I’ve always wanted to live in San Francisco, but the danger of earthquakes is very high. Even though the damage due to earthquakes is low, a quake in the city would be very dangerous. I will pick Sacramento, where the danger of a catastrophic earthquake is lower, but still be close enough to visit the city often.

“I would live in Phoenix, since my father’s family is from there. Drought and heat will be my biggest concerns. I should make sure that I have a way of storing water for drinking in a long drought, and maybe choose a house that is designed to be cool without always using the air conditioner. I should definitely learn about any other steps I should take to avoid problems.”

A successful answer must:
- connect a city with a hazard reasonable for the area.
- present at least one clear way of mitigating the effect of the disaster, and
- demonstrate that the student is proposing a reasonable balance between positive factors and the type and scope of disaster.