

Questions - GeoHaz4 - Flooding (Ch. 5)

Multiple Choice

1. What is the role of a drainage basin?
 - a. Water from rivers or streams drain into the basin
 - b. Water from the basin drains into the rivers or streams
 - c. Soil in a drainage basin is very permeable, and flood waters can drain into them instead of going into larger rivers
 - d. Soil in a drainage basin is very impermeable, and water is held there to evaporate instead of going into large rivers
 - e. Drainage basins contain an intricate series of underground tunnels that drain water into the ocean
2. Which river would have the highest gradient?
 - a. Rivers near their floodplains
 - b. Rivers near the ocean
 - c. Rivers in gentle valleys
 - d. Rivers flowing into dams
 - e. Rivers moving down mountains
3. What would the longitudinal profile of a river flowing from a gentle valley into an ocean look like?
 - a. A steeply decreasing line
 - b. A steeply increasing line
 - c. A gently decreasing line
 - d. A steeply decreasing line
 - e. An increasing and then decreasing line
4. Which of the following loads are most likely to consist of heavy rocks and boulders?
 - a. Bed load
 - b. Suspended load
 - c. Dissolved load
 - d. Structural load
 - e. Buoyant load
5. Which of the following loads would make a river appear murky or dirty?
 - a. Bed load
 - b. Suspended load
 - c. Dissolved load
 - d. Structural load
 - e. Buoyant load

6. Which channel would have the greatest stream velocity?
 - a. A narrow channel at the head of a stream
 - b. A narrow channel at the base level of a stream
 - c. A wide channel at the head of the stream
 - d. A wide channel at the base level of a stream
 - e. Stream velocity does not depend on width or elevation of stream

7. Choose the BEST answer. Which would increase during a flood, discharge or velocity?
 - a. Discharge because there is more water flowing
 - b. Velocity because more water is trying to flow through a smaller space
 - c. Neither discharge or velocity because the stream will be doing more erosion during a flood
 - d. Neither discharge or velocity because both are constant for any stream
 - e. Both discharge and velocity will increase because more water is flowing into a smaller space

8. Where does a meandering river run the fastest?
 - a. On the outside of a bend
 - b. On the inside of a bend
 - c. At the mouth of the river
 - d. Along the floodplain
 - e. Near the point bars

9. What is avulsion?
 - a. When a river overflows its banks and leaves pools of water behind
 - b. When a river turns and moves in the opposite direction due to uplift
 - c. When a river shifts its position after a flood
 - d. When a river overflows and inundates the floodplain
 - e. When a river deposits sediment and creates a fanlike structure

10. Where on a river would you most likely find point bars?
 - a. On the outside of a bend
 - b. On the inside of a bend
 - c. At the mouth of the river
 - d. At the source of the river
 - e. In the center of the river

11. Where on a river would you most likely find cutbanks and why?
 - a. On the outside of a bend because that is where the river erodes most
 - b. On the inside of a bend because that is where the river erodes most
 - c. On the outside of a bend because that is where the river deposits most
 - d. On the inside of a bend because that is where the river deposits most
 - e. In the middle of the river because that is where it moves the fastest

12. Which of the following affect whether a river will flood?
 - a. Amount of precipitation in the drainage basin
 - b. Rate at which the precipitation soaks into earth
 - c. Rate at which the runoff moves towards the river
 - d. Amount of moisture in the soil
 - e. All of the above affect flooding

13. Which of the following cases would you NOT expect to result in flooding?
 - a. Rain falling on an area where soil has been saturated due to persistent thunderstorms
 - b. Rain falling on an area where the ground is frozen
 - c. Rain falling on an area that is typically very dry such as a desert
 - d. Rain falling on an area that has been recently developed into a housing community with new paved roads and sidewalks
 - e. All of the above situations would probably result in flooding

14. In which of the following environments are flash floods NOT common?
 - a. Higher elevations in a drainage basin
 - b. Arid environments with steep slopes
 - c. Humid environments with meandering rivers
 - d. Urban environments with poor drainage
 - e. Arid areas with little vegetation

15. What distinguishes flash floods from downstream floods?
 - a. Flash floods are common as a result of lightning storms
 - b. Flash floods occur in the upper part of the basin
 - c. Flash floods are more dangerous
 - d. Flash floods are less dangerous
 - e. Flash floods are only common with large rivers

16. Which of the following locations are NOT at risk from floods?
 - a. North Dakota
 - b. Washington
 - c. Pennsylvania
 - d. Texas
 - e. All of the U.S. have some risk of floods

17. Which of the following natural hazards is the number 1 disaster in the United States in the past century?
 - a. Floods
 - b. Volcanoes
 - c. Earthquakes
 - d. Hurricanes
 - e. Lightning

18. Which of the following adverse effects of natural hazards is NOT associated with flooding?
- Pollution
 - Disease
 - Destruction of buildings
 - Land upheaval
 - Economic loss
19. What is the BEST reason why periodic flooding of the Mississippi River could have decreased the disaster from Hurricane Katrina to New Orleans?
- Periodic flooding would have built up the delta, raising the elevation of New Orleans
 - Periodic flooding would have destroyed areas that were hit by Hurricane Katrina
 - Periodic flooding would have kept people from living or building in New Orleans
 - Periodic flooding would have given the government more opportunities to prepare for disaster
 - Periodic flooding would have made people more mindful of hurricane warnings
20. How would a river in an area changed from forest to farmland react to changes?
- Decreased amounts of sediment would increase the gradient of the stream
 - Increased amounts of sediment would increase the gradient of the stream
 - Decreased amounts of sediment would decrease the gradient of the stream
 - Increased amounts of sediment would decrease the gradient of the stream
 - The change would have no effect on the stream
21. How would the hydrograph of a large rainstorm change after urbanization of an area?
- The hydrograph would become a straight line
 - The peak of the hydrograph would become lower and wider
 - The peak of the hydrograph would become higher and wider
 - The peak of the hydrograph would become higher and narrower
 - The peak of the hydrograph would become lower and narrower
22. How does urbanization influence a river or stream?
- Urbanization increases the frequency of floods.
 - Urbanization increases the magnitude of floods.
 - Urbanization increases the rate at which water flows to the river.
 - Urbanization decreases stream flow during dry season.
 - All of the above are ways in which urbanization influences a river.

23. What are some things that governments can do to minimize the damage from floods?
- a. Make a detailed map of the floodplain in order to determine which areas are the most vulnerable.
 - b. Make floodplain maps available to the public and encourage homeowners to purchase insurance.
 - c. Make a plan to regulate construction on the floodplain.
 - d. Construct drains and pumps to remove potential floodwaters.
 - e. All of the above are things that governments can do to minimize the damage from floods.
24. Which of the following are things that you should NOT do in preparing for a flood?
- a. Buy flood insurance.
 - b. Place sandbags to block water from entering doors.
 - c. Make a flood kit and place it in your basement.
 - d. Make a flood plan with members of your household.
 - e. Find out how to turn off utilities in the event of a flood.
25. What should you do during a flood?
- a. Move to higher ground away from the river.
 - b. Wade into the water to see how deep it really is.
 - c. Drive your car through water to get to safety.
 - d. Swim across water to a safer location.
 - e. Go to a bridge and watch the water rise.