6

Student: _____

1. Streams draw their water from a region known as the
   A. Drainage divide.
   B. Drainage lake.
   C. Drainage aquifer.
   D. Drainage basin.

2. A stream's load consists of
   A. The amount of water it carries over a specified time period.
   B. The amount of material (solid and dissolved) carried by the water in a stream.
   C. The amount of water and solid material carried downstream.
   D. The amount by which a delta increases in size in a year.

3. A drainage basin
   A. Includes the area from which surface water flows into a stream segment.
   B. For a river includes all the drainage basins for that river's tributaries.
   C. Increases in size and proportion to the size of the stream or river it feeds, for the same climate.
   D. All of the choices are correct.

4. The principal source of evaporated water that becomes precipitation are
   A. Streams.
   B. Glacier ice.
   C. The oceans.
   D. Volcanic eruptions.

5. The volume of water flowing past a point along a stream in a given period of time is the stream's
   A. Drainage basin.
   B. Discharge.
   C. Load.
   D. Capacity.

6. If the width of the stream is 20 feet, the depth 5 feet, and velocity 10 feet per second, then the discharge is
   A. 1000 feet/second.
   B. 1000 square feet/second.
   C. 1000 cubic feet per second.
   D. None of the answers are correct.

7. The total amount of material transported by the stream is called
   A. Capacity.
   B. Strength.
   C. Volume.
   D. Load.

8. The suspended load of a stream consists of
   A. Fine sediment carried in suspension.
   B. Material rolled along the streambed.
   C. Dissolved material in solution.
   D. Sediment trapped in a reservoir behind a dam.

9. The steepness or slope of a stream channel in the direction of flow is the channel's
   A. Capacity.
   B. Bed load.
   C. Base level.
   D. Gradient.

10. A fan-shaped pile of sediment deposited at a stream's mouth is a
   A. Delta.
   B. Alluvial fan.
   C. Discharge.
   D. A or B.

11. A stream generates its own floodplain by
   A. Erosion during meander migration.
   B. Sediment deposition during meander migration.
   C. Sediment deposition during flooding.
   D. All of the choices are correct.

12. A flood crest
   A. Usually increases downstream from the area covered by the rain storm.
   B. Is the maximum stage of the river at any point along the stream from a flood event.
   C. Can take years to travel from its initiation point to the mouth of a river.
   D. Is when a stream overflows its normal flow channel and spills out onto the floodplain.

13. When a stream bends or curves what begins to form
   A. Point bars.
   B. Cut banks.
   C. Meanders.
   D. Oxbow lakes.

14. A cut-off meander is also known as
   A. A drainage basin.
   B. An oxbow.
   C. A floodplain.
   D. A delta.

15. A depositional feature formed when a fast-flowing stream joins a slower one or a mountain stream flows out into a plain is
   A. An oxbow.
   B. A meander.
   C. A floodplain.
   D. An alluvial fan.

16. On the inside bank of a meander, where water flow slowly, _____ may be deposited.
   A. A delta
   B. An oxbow
   C. A point bar
   D. An alluvial fan

17. What develops a pattern of many complex channels that divide and rejoin and when the sediment load is considerably larger in relationship to the volume of water?
   A. Oxbow lake
   B. Meander
   C. Braided stream
   D. Floodplain

18. Below ground, water moves through soils and rocks by a process known as
    A. Infiltration.
    B. Percolation.
    C. Seepage.
    D. Discharge.

19. All other factors being equal, the risk of stream flooding is probably greatest
    A. In an area of high rainfall evenly distributed through the year.
    B. In a very cold climate where snow rarely melts.
    C. In an area that receives its rain mostly in a few intense storms.
    D. In an area that receives little rain.

20. A hydrograph is:
    A. A plot of stream stage or discharge versus time
    B. A map showing the extent of a floodplain
    C. A diagram that illustrates flood recurrence intervals
    D. A graph of variations in precipitation through time

21. A dam breaks and stream stage is being monitored just below the dam and several kilometers downstream. Which of the following is true?
    A. The upstream hydrograph will show a lower, broader peak.
    B. The flood will produce identically shaped peaks on the hydrographs at both places.
    C. The downstream hydrograph will show a lower, broader peak.
    D. Overall stream discharge will be unaffected; hydrographs will show no changes.

22. A region has just had a 100-year flood. That means that
    A. A flood event of that size has a 1 percent probability of occurrence in the next year.
    B. Another equally large flood will occur in one hundred years.
    C. Another flood of that size cannot happen in the same year.
    D. All of the choices are correct.

23. Urbanization in a floodplain
    A. Does not occur because it would be unsafe.
    B. Reduces flood hazards by preventing infiltration.
    C. Has no effect on flood hazards.
    D. Increases flood hazards by reducing floodplain storage capacity and increasing surface runoff.

24. Tile drainage systems and city storm sewers
    A. Reduce flood hazards by removing water quickly.
    B. Have no effect on flood hazards; they do not drain into streams.
    C. Increase flood hazards by preventing infiltration.
    D. Reduce flooding where they are installed but may increase it along a stream into which the discharge flows.

25. Strategies designed to reduce damage to structures in floodplains include
    A. Planting vegetation within the stream channel.
    B. Filling in land in the floodplain to reduce flood volume.
    C. Raising buildings on stilts to elevate floor levels.
    D. All of the choices are correct.

26. Suitable uses for floodplain land include all of the following except
    A. Grazing land for livestock.
    B. A municipal sewage treatment plant.
    C. A municipal park.
    D. A golf course.

27. A basin designed to hold surplus surface runoff, keeping it out of a stream is
    A. A retention pond.
    B. A drainage basin.
    C. A delta.
    D. An oxbow lake.

28. Channelization strategies include all of the following except
    A. Dredging and deepening a channel.
    B. Straightening a channel.
    C. Building a flood-control dam.
    D. Deliberately cutting off a meander.

29. Artificial levees built along a stream
    A. Effectively stop all flooding, as along the Mississippi River.
    B. May, if breached, trap floodwaters behind them.
    C. Reduce stream stages by moving water faster.
    D. All of the choices are correct.

30. An increase in sedimentation along a stream can be caused by
    A. A recent forest fire.
    B. A beaver dam.
    C. Fish spawning.
    D. Animal migration.

31. Hazards regarding floods can be greatly reduced where open lands are available by using
    A. Slope stabilization.
    B. Rock bolts.
    C. Channelization.
    D. Retention ponds.

32. A flood stage is reached when the stream stage supersedes the
    A. Bank width.
    B. Bank length.
    C. Bank height.
    D. Bank stage.

33. When a stream carrying suspended sediment enters a reservoir,
    A. It deposits its suspended sediment load.
    B. Scouring by the suspended sediment carves the reservoir deeper.
    C. The sediment stays suspended in the reservoir water and pollutes it.
    D. The suspended sediment stays in suspension and is released below the dam, polluting water downstream.

34. The U.S. Geological Survey and the National Weather Service work together to
    AAlert the public about impending flash flooding by using drainage basin characteristics (USGS) and
    . meteorological events (NWS) to predict areas and timing where rapid water level rise may occur.
    B. Judge the amount of sedimentation that will fill a river channel in a year and thus help in flood forecasting.
    C. Keep public officials informed about the narrowing or widening of the 100-year floodplain in upstream drainage basins.
    D. Inform insurance companies that provide flood insurance to individuals about locations where flooding is most probable.

35. Saltation is a process by which streams dissolve soluble minerals and become saltier.
    True False

36. A stream's base level is the lowest level to which it can cut down or erode its channel.
    True False

37. Stream-deposited sediments are often well sorted because the size of particles moved is a function of stream velocity, quantity of water, and discharge.
True False

38. Once formed, meanders enlarge downward only, cutting deeper and deeper over time.
True False

39. A cut bank is the outside bank of a meander that is subject to erosion.
True False

40. Highly porous and permeable soils would reduce flooding.
True False

41. Floods only occur where human activities tamper with natural stream systems.
True False

42. Maximum stage is used to describe the magnitude of the flood and when the maximum stage is reached the stream is said to trough.
True False

43. Only surface runoff reaches streams; subsurface water is stagnant and does not move.
True False

44. Plants can reduce the risk of flooding by consuming water, keeping soil loose and permeable and slowing surface runoff.
True False

45. Streams respond quickly to water input, so once a heavy rainstorm has stopped, floodwaters will rise no higher.
True False

46. Because upstream floods affect localized areas, they are more likely to be brief than are downstream floods.
True False

47. The height of the surface of the water is at any given point is indicated by the stage of the stream.
True False

48. A flash flood is a variety of upstream flood.
True False

49. The difference of time between a precipitation event and peak flood discharge is termed as peak lag time.
True False

50. The term "flood-frequency curve", though in common use, may be misleading in that it implies that floods of certain sizes recur at regular intervals.
True False

51. Concern about floods is such that accurate flood-hazard maps are now available for all streams in the United States.
True False

52. Most human activities tend to reduce flood hazards, so the frequency of floods of a given size has been decreasing for nearly all streams.
True False

53. Infiltration of water below an artificial reservoir can induce earthquakes.
True False

54. Constructing levees may increase the amount of property at risk from future flooding by encouraging floodplain development.
    True False

55. A diversion channel is used to shorten a stream and increase its gradient.
    True False

56. Use of dams to form reservoirs for water supply may conflict with the flood-control functions of the dam/reservoir system.
    True False

57. Unlike streams, lakes do not flood because runoff does not drain into lakes.
    True False

58. When flood recurrence intervals are estimated from historic records, the estimated intervals depend strongly on the length of time represented by the records.
    True False

59. After disastrous natural floods in the Grand Canyon in 1942 and 1996, the Glen Canyon Dam was built to control those floods.
    True False

60. Flash floods may be especially likely where runoff water is confined to a narrow valley.
    True False

61. The Aswan High Dam in Egypt has resulted in diminished crop production in the Nile River floodplain downstream because annual flooding no longer brings new and fertile soil.
    True False

62. To minimize the disturbance to a stream spanned by a bridge, supports for the bridge should be founded within the stream and made as wide as possible.
    True False

63. The Glen Canyon Dam, built on the Colorado River between 1956 and 1966 forming Lake Powell is now considered by many to be an environmental liability.
    True False

6 Key

1. Streams draw their water from a region known as the
A. Drainage divide.
B. Drainage lake.
C. Drainage aquifer.
D. Drainage basin.

Montgomery - Chapter 06 #1

2. A stream's load consists of
A. The amount of water it carries over a specified time period.
B. The amount of material (solid and dissolved) carried by the water in a stream.
C. The amount of water and solid material carried downstream.
D. The amount by which a delta increases in size in a year.

Montgomery - Chapter 06 #2

3. A drainage basin
A. Includes the area from which surface water flows into a stream segment.
B. For a river includes all the drainage basins for that river's tributaries.
C. Increases in size and proportion to the size of the stream or river it feeds, for the same climate.
D. All of the choices are correct.

Montgomery - Chapter 06 #3

4. The principal source of evaporated water that becomes precipitation are
A. Streams.
B. Glacier ice.
C. The oceans.
D. Volcanic eruptions.

Montgomery - Chapter 06 #4

5. The volume of water flowing past a point along a stream in a given period of time is the stream's
A. Drainage basin.
B. Discharge.
C. Load.
D. Capacity.

Montgomery - Chapter 06 #5

6. If the width of the stream is 20 feet, the depth 5 feet, and velocity 10 feet per second, then the discharge is
A. 1000 feet/second.
B. 1000 square feet/second.
C. 1000 cubic feet per second.
D. None of the answers are correct.

Montgomery - Chapter 06 #6

7. The total amount of material transported by the stream is called
A. Capacity.
B. Strength.
C. Volume.
D. Load.

Montgomery - Chapter 06 #7

8. The suspended load of a stream consists of
A. Fine sediment carried in suspension.
B. Material rolled along the streambed.
C. Dissolved material in solution.
D. Sediment trapped in a reservoir behind a dam.

Montgomery - Chapter 06 #8

9. The steepness or slope of a stream channel in the direction of flow is the channel's
   A. Capacity.
   B. Bed load.
   C. Base level.
   D. Gradient.

Montgomery - Chapter 06 #9

10. A fan-shaped pile of sediment deposited at a stream's mouth is a
   A. Delta.
   B. Alluvial fan.
   C. Discharge.
   D. A or B.

Montgomery - Chapter 06 #10

11. A stream generates its own floodplain by
   A. Erosion during meander migration.
   B. Sediment deposition during meander migration.
   C. Sediment deposition during flooding.
   D. All of the choices are correct.

Montgomery - Chapter 06 #11

12. A flood crest
   A. Usually increases downstream from the area covered by the rain storm.
   B. Is the maximum stage of the river at any point along the stream from a flood event.
   C. Can take years to travel from its initiation point to the mouth of a river.
   D. Is when a stream overflows its normal flow channel and spills out onto the floodplain.

Montgomery - Chapter 06 #12

13. When a stream bends or curves what begins to form
   A. Point bars.
   B. Cut banks.
   C. Meanders.
   D. Oxbow lakes.

Montgomery - Chapter 06 #13

14. A cut-off meander is also known as
   A. A drainage basin.
   B. An oxbow.
   C. A floodplain.
   D. A delta.

Montgomery - Chapter 06 #14

15. A depositional feature formed when a fast-flowing stream joins a slower one or a mountain stream flows out into a plain is
   A. An oxbow.
   B. A meander.
   C. A floodplain.
   D. An alluvial fan.

Montgomery - Chapter 06 #15

16. On the inside bank of a meander, where water flow slowly, _____ may be deposited.
   A. A delta
   B. An oxbow
   C. A point bar
   D. An alluvial fan

Montgomery - Chapter 06 #16

17. What develops a pattern of many complex channels that divide and rejoin and when the sediment load is considerably larger in relationship to the volume of water?
A. Oxbow lake
B. Meander
C. Braided stream
D. Floodplain

Montgomery - Chapter 06 #17

18. Below ground, water moves through soils and rocks by a process known as
A. Infiltration.
B. Percolation.
C. Seepage.
D. Discharge.

Montgomery - Chapter 06 #18

19. All other factors being equal, the risk of stream flooding is probably greatest
A. In an area of high rainfall evenly distributed through the year.
B. In a very cold climate where snow rarely melts.
C. In an area that receives its rain mostly in a few intense storms.
D. In an area that receives little rain.

Montgomery - Chapter 06 #19

20. A hydrograph is:
A. A plot of stream stage or discharge versus time
B. A map showing the extent of a floodplain
C. A diagram that illustrates flood recurrence intervals
D. A graph of variations in precipitation through time

Montgomery - Chapter 06 #20

21. A dam breaks and stream stage is being monitored just below the dam and several kilometers downstream. Which of the following is true?
A. The upstream hydrograph will show a lower, broader peak.
B. The flood will produce identically shaped peaks on the hydrographs at both places.
C. The downstream hydrograph will show a lower, broader peak.
D. Overall stream discharge will be unaffected; hydrographs will show no changes.

Montgomery - Chapter 06 #21

22. A region has just had a 100-year flood. That means that
A. A flood event of that size has a 1 percent probability of occurrence in the next year.
B. Another equally large flood will occur in one hundred years.
C. Another flood of that size cannot happen in the same year.
D. All of the choices are correct.

Montgomery - Chapter 06 #22

23. Urbanization in a floodplain
A. Does not occur because it would be unsafe.
B. Reduces flood hazards by preventing infiltration.
C. Has no effect on flood hazards.
D. Increases flood hazards by reducing floodplain storage capacity and increasing surface runoff.

Montgomery - Chapter 06 #23

24. Tile drainage systems and city storm sewers
A. Reduce flood hazards by removing water quickly.
B. Have no effect on flood hazards; they do not drain into streams.
C. Increase flood hazards by preventing infiltration.
D. Reduce flooding where they are installed but may increase it along a stream into which the discharge flows.

Montgomery - Chapter 06 #24

25. Strategies designed to reduce damage to structures in floodplains include
A. Planting vegetation within the stream channel.
B. Filling in land in the floodplain to reduce flood volume.
C. Raising buildings on stilts to elevate floor levels.
D. All of the choices are correct.

Montgomery - Chapter 06 #25

26. Suitable uses for floodplain land include all of the following except
A. Grazing land for livestock.
B. A municipal sewage treatment plant.
C. A municipal park.
D. A golf course.

Montgomery - Chapter 06 #26

27. A basin designed to hold surplus surface runoff, keeping it out of a stream is
A. A retention pond.
B. A drainage basin.
C. A delta.
D. An oxbow lake.

Montgomery - Chapter 06 #27

28. Channelization strategies include all of the following except
A. Dredging and deepening a channel.
B. Straightening a channel.
C. Building a flood-control dam.
D. Deliberately cutting off a meander.

Montgomery - Chapter 06 #28

29. Artificial levees built along a stream
A. Effectively stop all flooding, as along the Mississippi River.
B. May, if breached, trap floodwaters behind them.
C. Reduce stream stages by moving water faster.
D. All of the choices are correct.

Montgomery - Chapter 06 #29

30. An increase in sedimentation along a stream can be caused by
A. A recent forest fire.
B. A beaver dam.
C. Fish spawning.
D. Animal migration.

Montgomery - Chapter 06 #30

31. Hazards regarding floods can be greatly reduced where open lands are available by using
A. Slope stabilization.
B. Rock bolts.
C. Channelization.
D. Retention ponds.

Montgomery - Chapter 06 #31

32. A flood stage is reached when the stream stage supersedes the
A. Bank width.
B. Bank length.
C. Bank height.
D. Bank stage.

Montgomery - Chapter 06 #32

33. When a stream carrying suspended sediment enters a reservoir,
A. It deposits its suspended sediment load.
B. Scouring by the suspended sediment carves the reservoir deeper.
C. The sediment stays suspended in the reservoir water and pollutes it.
D. The suspended sediment stays in suspension and is released below the dam, polluting water downstream.

Montgomery - Chapter 06 #33

34. The U.S. Geological Survey and the National Weather Service work together to
AAlert the public about impending flash flooding by using drainage basin characteristics (USGS) and **.** meteorological events (NWS) to predict areas and timing where rapid water level rise may occur.
B. Judge the amount of sedimentation that will fill a river channel in a year and thus help in flood forecasting.
C. Keep public officials informed about the narrowing or widening of the 100-year floodplain in upstream drainage basins.
D. Inform insurance companies that provide flood insurance to individuals about locations where flooding is most probable.

Montgomery - Chapter 06 #34

35. Saltation is a process by which streams dissolve soluble minerals and become saltier.
FALSE

Montgomery - Chapter 06 #35

36. A stream's base level is the lowest level to which it can cut down or erode its channel.
TRUE

Montgomery - Chapter 06 #36

37. Stream-deposited sediments are often well sorted because the size of particles moved is a function of stream velocity, quantity of water, and discharge.
TRUE

Montgomery - Chapter 06 #37

38. Once formed, meanders enlarge downward only, cutting deeper and deeper over time.
FALSE

Montgomery - Chapter 06 #38

39. A cut bank is the outside bank of a meander that is subject to erosion.
TRUE

Montgomery - Chapter 06 #39

40. Highly porous and permeable soils would reduce flooding.
TRUE

Montgomery - Chapter 06 #40

41. Floods only occur where human activities tamper with natural stream systems.
FALSE

Montgomery - Chapter 06 #41

42. Maximum stage is used to describe the magnitude of the flood and when the maximum stage is reached the stream is said to trough.
FALSE

Montgomery - Chapter 06 #42

43. Only surface runoff reaches streams; subsurface water is stagnant and does not move.
FALSE

Montgomery - Chapter 06 #43

44. Plants can reduce the risk of flooding by consuming water, keeping soil loose and permeable and slowing surface runoff.
TRUE

Montgomery - Chapter 06 #44

45. Streams respond quickly to water input, so once a heavy rainstorm has stopped, floodwaters will rise no higher.
FALSE

Montgomery - Chapter 06 #45

46. Because upstream floods affect localized areas, they are more likely to be brief than are downstream floods.
TRUE

Montgomery - Chapter 06 #46

47. The height of the surface of the water is at any given point is indicated by the stage of the stream.
TRUE

Montgomery - Chapter 06 #47

48. A flash flood is a variety of upstream flood.
TRUE

Montgomery - Chapter 06 #48

49. The difference of time between a precipitation event and peak flood discharge is termed as peak lag time.
TRUE

Montgomery - Chapter 06 #49

50. The term "flood-frequency curve", though in common use, may be misleading in that it implies that floods of certain sizes recur at regular intervals.
TRUE

Montgomery - Chapter 06 #50

51. Concern about floods is such that accurate flood-hazard maps are now available for all streams in the United States.
FALSE

Montgomery - Chapter 06 #51

52. Most human activities tend to reduce flood hazards, so the frequency of floods of a given size has been decreasing for nearly all streams.
FALSE

Montgomery - Chapter 06 #52

53. Infiltration of water below an artificial reservoir can induce earthquakes.
TRUE

Montgomery - Chapter 06 #53

54. Constructing levees may increase the amount of property at risk from future flooding by encouraging floodplain development.
TRUE

Montgomery - Chapter 06 #54

55. A diversion channel is used to shorten a stream and increase its gradient.
FALSE

Montgomery - Chapter 06 #55

56. Use of dams to form reservoirs for water supply may conflict with the flood-control functions of the dam/reservoir system.
TRUE

Montgomery - Chapter 06 #56

57. Unlike streams, lakes do not flood because runoff does not drain into lakes.
FALSE

Montgomery - Chapter 06 #57

58. When flood recurrence intervals are estimated from historic records, the estimated intervals depend strongly on the length of time represented by the records.
TRUE

Montgomery - Chapter 06 #58

59. After disastrous natural floods in the Grand Canyon in 1942 and 1996, the Glen Canyon Dam was built to control those floods.
FALSE

Montgomery - Chapter 06 #59

60. Flash floods may be especially likely where runoff water is confined to a narrow valley.
TRUE

Montgomery - Chapter 06 #60

61. The Aswan High Dam in Egypt has resulted in diminished crop production in the Nile River floodplain downstream because annual flooding no longer brings new and fertile soil.
TRUE

Montgomery - Chapter 06 #61

62. To minimize the disturbance to a stream spanned by a bridge, supports for the bridge should be founded within the stream and made as wide as possible.
FALSE

Montgomery - Chapter 06 #62

63. The Glen Canyon Dam, built on the Colorado River between 1956 and 1966 forming Lake Powell is now considered by many to be an environmental liability.
TRUE

Montgomery - Chapter 06 #63

6 Summary

Category	*# of Questions*
Montgomery - Chapter 06	63