

Student name _____

Test 2 - Form B
3370:200 Section 001
Fall 1997
Environmental Geology

READ THIS FIRST!!!!

NOTE:

Count pages to make sure that you have all of them.

Sign the question sheet and turn it in with your answer sheet.

Fill in all information requested on the answer sheet. You lose 2 points for each item not legibly filled in.

Test is over at 9:40 a.m.

There are 5 short answer questions, worth 4 points each. Partial credit is possible on these. There are also 40 multiple choice questions. Each is worth 2 points. Total value of the test is 100 points.

You may leave when you have completed the test, but do so quietly in consideration for those who are still working. Bring your test to Mr. Knight or me in the front of the room.

Test covers lectures 12 through 28 (Oceans Video).

RELAX! If a question is unclear to you, please raise your hand.

FOR INSTRUCTOR USE ONLY:

SCORE PART 1 _____

SCORE PART 2. _____

TOTAL SCORE _____

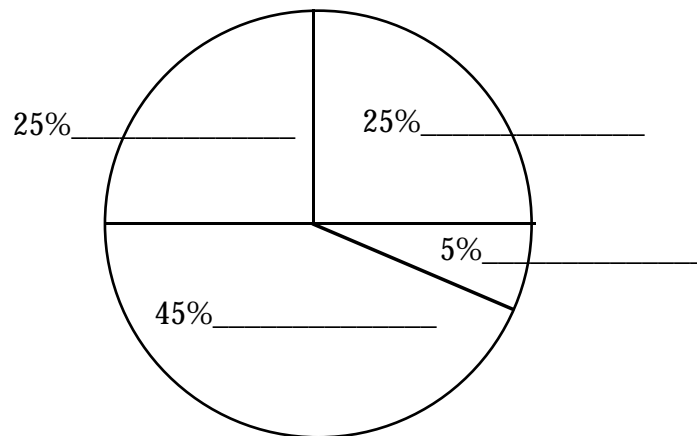
**For the 5 questions below (A through E) write your answer directly on the test.
Each is worth 4 points**

- A. I have a gallon milk jug (Jug 1), filled with marbles. I have another Jug (Jug 2) which has no marbles, but is full of water. I carefully pour water in to Jug1 from (Jug2). When Jug 1 is filled to the top with water, I measure how much water I have poured out of Jug2, and find that I have poured $\frac{1}{2}$ gallon in to Jug 1. What is the porosity of the material (marbles) in Jug1, expressed as a percentage?

- B. What is a Levee?

- C. What is the freezing point of water, in degrees Fahrenheit?

- D. Soil is composed of 4 main components, in the percentages shown in the pie chart. Write in what the components are, in each spot.



- E. What did the Nileometer measure, and in what units?

For the 40 questions below (1 through 40) put your answer on the computer form. Each is worth 2 points

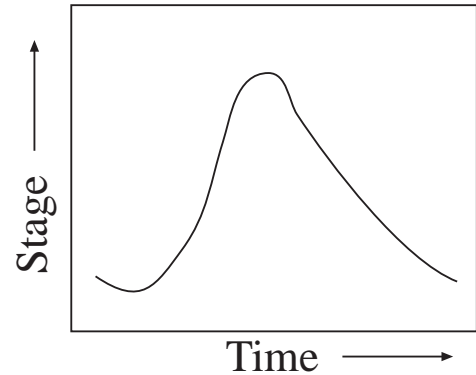
1. **Which is the slowest moving type of mass wasting?**
 - A. Avalanche
 - B. Debris flow
 - C. Creep
 - D. Earth flow
2. **Freeze and thaw cycles affect creep.**
 - A. True
 - B. False
3. **What major disaster occurred in the U.S. in the 1930's:**
 - A. The dust bowl
 - B. Long Beach oil field subsidence
 - C. First man on the moon.
 - D. Tsunami in Hawaii
 - E. Eruption of Mt. St. Helens volcano.
4. **Landslides usually occur when the driving force is less than the resisting force.**
 - A. True
 - B. False
5. **What mineral is the major source of phosphate for humans and animals?**
 - A. Granite
 - B. Basalt
 - C. Quartz
 - D. Mercury
 - E. Apatite
6. **Triggering snow avalanches by Buffalo stampede is commonly done in some areas of the U.S.**
 - A. True
 - B. False
7. **Neither mining or karst development cause subsidence.**
 - A. True
 - B. False
8. **Excessive pumping of groundwater from sediments can cause subsidence or sinkhole development**
 - A. True
 - B. False
9. **The type of weathering reaction whereby salt and calcite are turned from solid materials into ions carried away by water is called**
 - A. Oxidation
 - B. Dissolution
 - C. Hydration
 - D. Hydrolysis
 - E. Feticine
10. **The Mississippi is a good example of a meandering river:**
 - A. True
 - B. False
11. **The Mississippi River is _____ kilometers long**
 - A. 40
 - B. 400
 - C. 4,000
 - D. 40,000

12. **On average, flooding on a given stream or river occurs every _____ years.**
A. 2.5
B. 5
C. 10
D. 20
E. 40
13. **Of all the water on the planet, what percentage is in the oceans?**
A. 10
B. 31
C. 63
D. 85
E. 97
14. **Water that has a pH of 4 is :**
A. Acidic
B. Basic (Alkaline)
C. Neutral
D. None of the above
15. **When a solid such as ice goes directly to a gaseous (vapor) state, the transformation is called:**
A. Plate tectonics
B. Evaporation
C. Sublimation
D. Freezing
E. None of the above
16. **On the rainiest day in Cilaos, La reunion, about this amount of rain fell**
A. 6 feet
B. 12 feet
C. 18 feet
D. 24 feet
E. None of the above
17. **It is raining at a rate of 1 inch per hour. My yard is made of a sandy soil with a high infiltration capacity. My sisters yard is made of clay, which has a very small infiltration capacity. Who's lawn will have more runoff?**
A. Dr. Sasowsky's
B. His sister
18. **A region where evapotranspiration exceeds rainfall is probably**
A. In a foreign country
B. A desert
C. A swamp
D. Heavily forested
E. A rain forest
19. **Maximum known depth to which permafrost extends is about:**
A. 15 feet
B. 35 feet
C. 100 feet
D. 500 feet
E. 5000 feet
20. **In Southern California 75% of the water used is imported from another area. Problems with this which we discussed in class are:**
A. Expense
B. Triggering earthquakes.
C. Damage to the environment of the withdrawal river
D. A & B
E. A & C

21. **The city of Las Vegas, Nevada withdraws drinking water from Lake Mead (The Colorado River). They discharge waste water (treated sewage) to:**
- Lake Mead (The Colorado River)
 - The Rio Grande River
 - Fields
 - The Mississippi River
 - B and C above.

22. **On the right is a record from a stream, showing time vs. stage. What is this graph called?**

- A geogram
- A hydrograph
- A seismograph
- A recumbent fold
- A or B



23. **Which of the below is an instream use of water?**
- Hydroelectric
 - Showering
 - Irrigation
 - Hog farming
 - Car washing
24. **When stream stage exceeds the river banks it is called a**
- Precipitation event
 - Flood
 - Earthquake
 - Ventricular fibrillation
 - Weathering event
25. **In a 100 year period there is a 100% chance of a 100 year flood occurring.**
- True
 - False
26. **About what portion of the U.S. population relies on groundwater?**
- 10%
 - 50%
 - 90%
27. **The most important (major) original source of groundwater is**
- Rivers
 - Rain
 - Floods
 - Tsunami
 - Snow
28. **Is water a more important resource than oil?**
- No
 - Yes

29. **Sand is quite porous, and would usually be considered to be a(n)**
A. Aquiplast
B. Aquifer
C. Aquiclude
D. Transform boundary
E. Important source of water
30. **Which has a lower porosity**
A. A well sorted sand
B. A poorly sorted mixture of sand, clay, and silt
31. **In the U.S. more topsoil is lost each year than is formed.**
A. True
B. False
32. **Ice comets are a significant source of water for Earth:**
A. True
B. False
33. **What are "gabions"?**
A. Baskets of rock
B. Lakes that form next to meandering streams
C. Creatures from outer space that will conquer the earth.
D. Breaks in the surface of the earth.
E. Speleothems found in Lechuguilla Cave.
34. **Potable water is ...**
A. only drinkable if boiled in a pot first.
B. fine for drinking as is.
35. **What portion of rainwater ends up (almost immediately) in rivers?**
A. 1/8
B. 1/4
C. 1/2
D. 3/4
E. All of it
36. **Slow rivers erode more rapidly than fast ones**
A. True
B. False
37. **The volume of water per unit time that is moving past a measurement point on a stream is called**
A. Traction
B. Stage
C. Palimpsest
D. Saltation
E. Discharge
38. **Which of the following is not a transport mechanism for material in a stream:**
A. Bed-load
B. Saltation
C. Solution
D. Suspension
E. None; all of the above are transport mechanisms.
39. **In what type rock do most caves form?**
A. Limestone
B. Basalt
C. Granite
D. Shale
E. Sandstone
40. **Where does most beach sand come from?**
A. Tsunami
B. Rivers
C. Wind
D. Human activities
E. Gypsum