Name: _____ Period: ____ Date: _____

Earth Science Midterm Review

Density:

1. a. How do you find the volume of a regularly shaped object?

   b. How do you find the volume of an irregularly shaped object?

2. What is the density of an object if .5 g occupies a volume of 100 ml? (formula – substitute – answer with UNITS)

3. If a piece of aluminum has a density of 2.7 g/cm3, what is the density if each piece if the original is cut in half?

4. Mount Everest has risen 20 meters in the last 100 years. How many meters did Mount Everest uplift in one year? (formula – substitute – answer with UNITS)

5. a. Write 56,000 in scientific notation. _____

   b. Write .00045 in scientific notation. _____

Latitude, Longitude & Landscapes:

6. Polaris is equal to your _____ .

7. What is the name of the latitude reference line? _____

8. What is the name of 0^{o} and 180^{o} longitude? _____ & _____

9. What is the latitude and longitude of Binghamton, NY? _____

10. What city is found at 42°N & 74° 15' W? _____

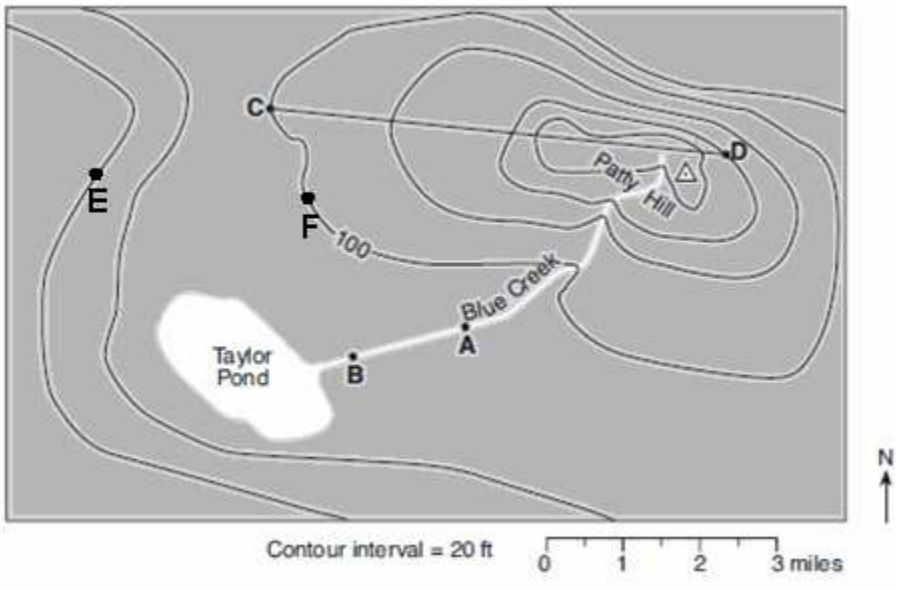
11. What landscape is Niagara Falls located in? _____

12. Old Forge is composed of what type of bed rock? _____

13. What city are you in if Polaris is located at 44°N? _____

Topographic Maps:

Use the map to the right to answer the following questions.



14. What is the contour interval?

_____

15. What is the highest elevation that the bench mark can be?

_____

16. What direction is Blue Creek flowing? _____

17. How can you tell the direction Blue Creek is flowing?

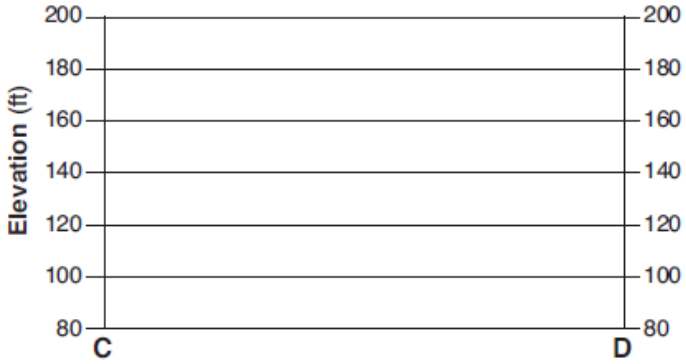
_____

_____

_____

18. Calculate the gradient between points A and B. (formula – substitute – answer with UNITS)

19. Construct a profile of line CD.



11. Please draw isolines for 10 m, 11 m, 12m and 13 m.

→

10	12	13	15
9	10	12	13
8	10	11	12
10	11	12	13

Minerals: (Page 16 of ESRT)

12. There are many ways to distinguish between minerals, such as: (define the following)

    a) Luster –

    b) Cleavage –

    c) Fracture –

    d) Streak –

    e) Hardness –

Rocks: (Page 6 & 7 of ESRT)

13. Describe how each rock type was formed and some key words that identify each type.

Type of Rock	How Formed	Physical Features
Igneous		
Sedimentary		
Metamorphic		

14. What is the **rock cycle**:

Weathering, Erosion & Water Cycle: (Page 6 of ESRT)

15. Explain the difference **between physical** and **chemical weathering**?

16. What is the relationship between surface area and weathering?

17. What factor is responsible for all types of mass movement? _____

18. What is soil comprised of?

19. Explain the following steps of the water cycle:

a. Evaporation –

d. Transpiration –

c. Condensation –

d. Precipitation –

e. Runoff –

f. Infiltration –

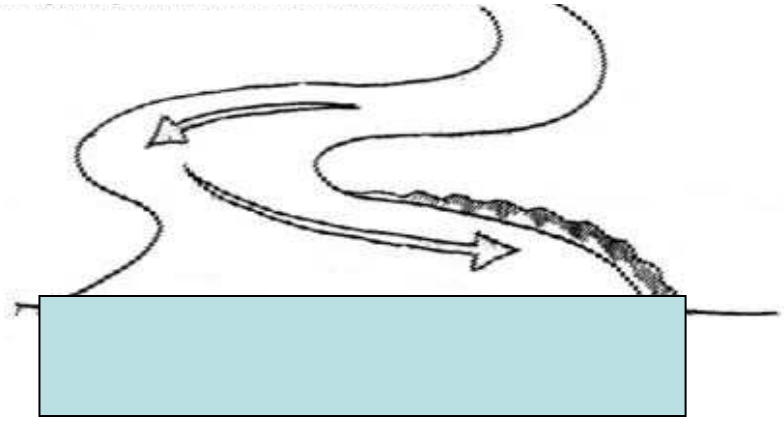
20. a) How fast does a stream have to move to carry the smallest pebble? _____

b) What size particle(s) can a stream carry if it is moving at a stream velocity of 100 cm/sec?

_____

c) What is the size range for a grain of sand? _____

21. Label where erosion and deposition is occurring.



22. Draw the profile of this right meander.

23. Place an X where the stream velocity if greatest.

24. List and explain the erosional and deposition features associated with the following agents.

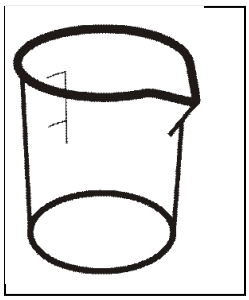
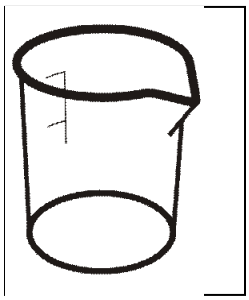
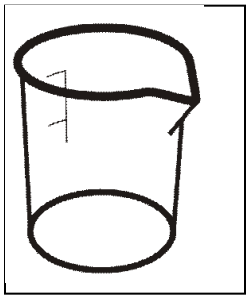
Agent	Sorted / Unsorted Rounded/ Angular	Features
Water		
Wind		
Glaciers		

<u>Porosity and Permeability</u>

25. Define **<u>Porosity</u>**.

26. Porosity IS NOT affected by _____

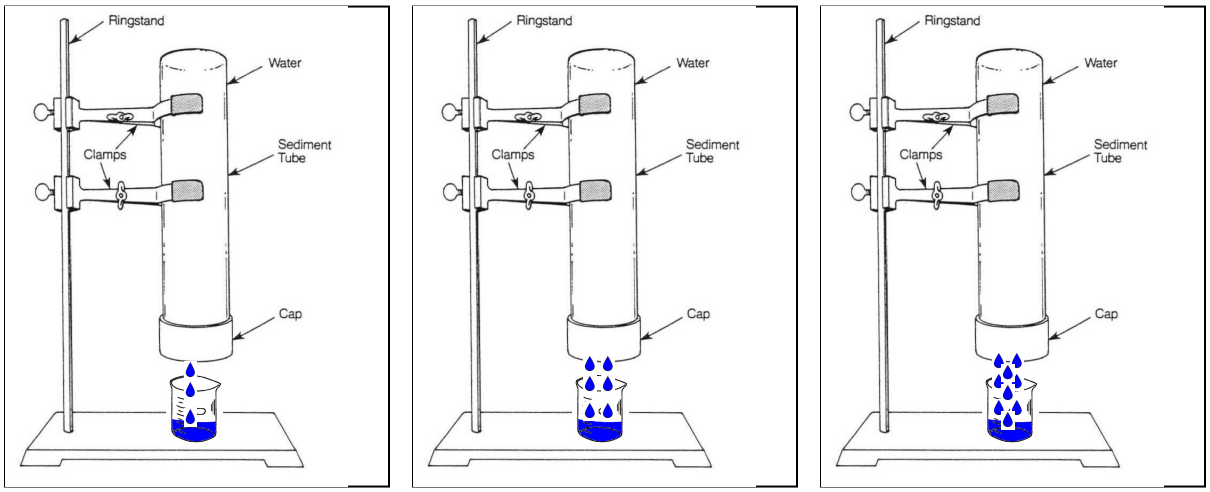
27. Compare the amount of pore spaces in each container. (they have equal volumes of sediment)

28. Define **<u>Permeability</u>**.

29. Using the diagrams below, explain the rate at which the water will infiltrate into each soil.

Fine Sediment → Coarse Sediment



30. Using the diagram below, explain the zone of saturation, zone of aeration and water table.