TEAM NAME _____

SOILS QUESTIONS ***ENVIROTHON 2006*** **SCORE: _____**

- **<u>Use the Shawano County Soil Survey for the following four questions.</u>**

1. What is the name of the lake on sheet #48? _____*(3pts)*

2. What is the soil symbol and full name of the soil map unit bordering the east side of the lake (in question 1) and lies in the Village of Cecil?

   _____ _____*(4pts)*
   (symbol) (map unit)

3. What is the drainage class of the Manawa Soil? (circle best answer) *(4pts)*

   a. well drained
   b. moderately well drained
   c. somewhat poorly drained

4. Using the General Soil Map, what is the name of the light yellow soil association (Group 8)?

   _____ - _____ *(4pts)*

- **<u>The following questions are general knowledge questions.</u>**

5. A layer of organic material on the surface of a mineral soil consisting of decaying plant residue is called what? *(4pts)*

   a. A horizon
   b. B horizon
   c. C horizon
   d. 0 horizon

6. What three particle size fractions make up the mineral part of a soil? *(6 pts)*
   ***(Hint:** What we can touch)*

   _____ _____ _____

7. What three conditions are necessary to identify a wetland? *(9pts)*

_____ _____ _____

8. Which factor is the most significant in the development of hydric soils? *(4pts)*

a. parent material originally limestone
b. an excess of microbial activity
c. lack of oxygen from water saturation
d. rapid decomposition of organic matter

9. What is the percent slope of a field that has a change in elevation of 83 feet and is 550 feet long? *(5pts)*

% slope = _____ (rounded to nearest whole number)

10. Which major nutrient contained in runoff water is associated with lake eutrophication? *(4pts)*

Nitrogen or Phosphorus

11. What two effects does soil compaction have on water running down a steep hill in a field? *(6pts)*

It increases _____

It decreases _____

12. Five major factors largely influence the kinds of soil that develop in the world. What are the five factors? *(10pts)*

1._____

2._____

3._____

4._____

5._____

- **<u>Use the samples in the containers to answer the next series of questions.</u>**

13. What is the soil texture in container 1? (circle one) *(3pts)*

sand silt clay

14. What is the soil texture in container 2? (circle one) *(3pts)*

sand silt clay

15. What is the soil texture in container 3? (circle one) *(3pts)*

sand silt clay

16. What is the soil structure in container 4? (circle one) *(3pts)*

a. Prismatic
b. Platy
c. Sub-angular blocky
d. Massive

- **<u>Visit the soil pit to answer the following questions.</u>**

17. What is the origin of the parent material in the pit? *(4pts)*

a. wind blown silts
b. water deposited sand and gravel
c. fine textured lake sediments

18. The soil in this pit would be considered a _____ soil. *(4pts)*

a. poorly drained
b. well drained

19. What is the name of the layer labeled I? _____ *(4pts)*

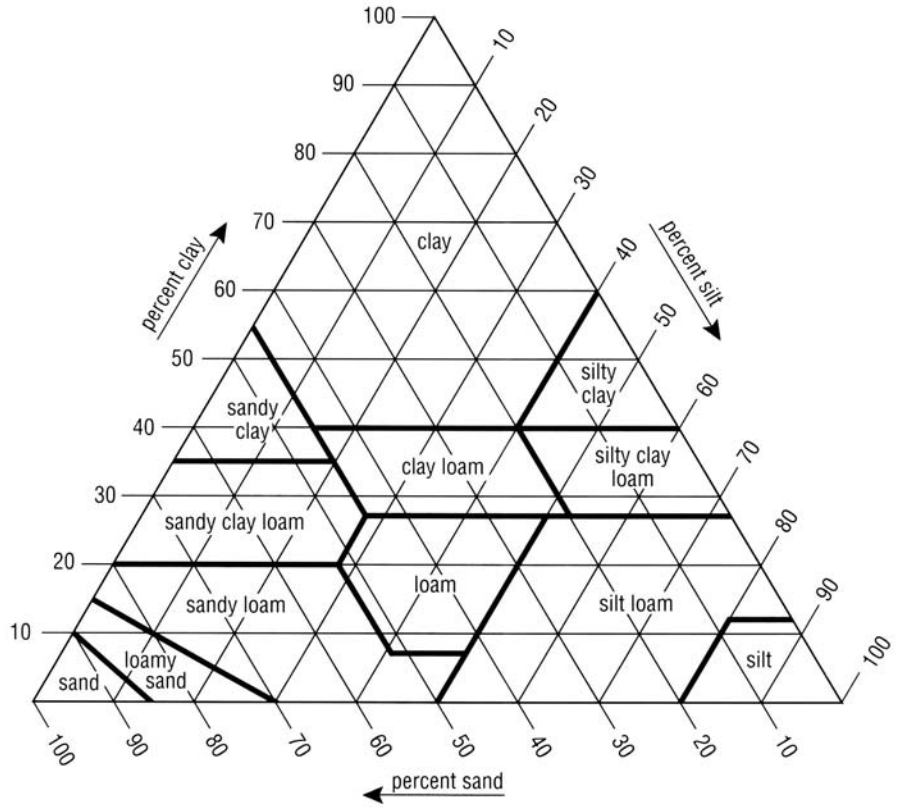
20. What is the name of the layer labeled II? _____ *(4pts)*

21. Using the texture triangle, identify the texture of the three soils based on their relative proportions of clay, sand, and silt. *(9pts)*

a. 50% clay, 35% silt, and 15% sand _____

b. 18% clay, 35% silt, and 46% sand _____

c. 12% clay, 56% silt, and 32% sand _____



Tie Breaker: *(4pts)*

Several days after it stops raining the downward movement of water in the soil essentially stops. The soil is then said to be at _____ _____.