

# 2005 ENVIROTHON – SOIL TEST QUESTIONS

1. Using the Soil Survey for Portage county, determine the page number of the Soil Survey Sheet that covers the Wisconsin Lions Camp at Rosholt? Sheet # 6. (2pts)
2. Using the Soil Survey for this county, determine the slope range for the soil map unit bordering the east side of Lions Lake? 12 - 20%. (2pts)
3. List the two types of soil that are listed as inclusions in the Norgo Silt Loam (NoB) map unit description. Kert & Plainbo. (4pts)
4. What is the depth range of the organic deposits in the Markey Muck Series? 16 to 51 inches. (4pts)
5. The Altdorf (Af) map unit would be a suitable source of Sand & Gravel? No (2pts)
6. What is the permeability in inches per hour of the subsoil in Richford (RfA) 2.0-6.0. (2pts)
7. Would Dolph (DoA) be a suitable soil to install an in ground Septic tank absorption field? No (2pts)
8. List three tree species that are suitable for reforestation on Wyocena (WyB).  
1. Red Pine 2. E. White Pine 3. Jack Pine. (4pts)
9. Mineral soil particles less than 0.002 millimeters in diameter are referred to as silt. False. (2pts)
10. A layer of organic material on the surface of a mineral soil consisting of decaying plant residue is called an A horizon B horizon C horizon or O horizon? O horizon. (2pts)
11. A soil with has a pH ranging from 7.4 to 7.8 is expressed as being Moderately Alkaline. False (2pts)
12. Excessively drained soils have rapid permeability and high available water capacity. False (2pts)
13. Nitrogen is the major nutrient in runoff water that is associated with lake eutrophication. False (2pts)
14. Study the soil sample in the container labeled A. What redoximorphic feature is present? Redox Concentrations (5pts)
15. Identify the type of soil structure in the container labeled B. Sub Angular Blocky. (5pts).

16. Identify the soil material in the container labeled C. Marl. (5pts)
17. Identify the soil material in the container labeled D. Muck. (5pts)
18. The particle size of the soil material in container E would be referred to as:  
**Very Fine Sand ( x )** Silt ( ) Clay ( ). (5pts)
19. The addition of lime to a field will increase or decrease the pH of the surface.  
**Increase ( x )** Decrease ( ). (2pts)
20. Wetlands are identified through the confirmation of what three wetland criteria?  
 (1) Hydric Soil (2) Hydrophytic Vegetation (3) wetland hydrology (6pts)
21. What effect does soil compaction have on (1) infiltration (2) runoff (3) plant growth?  
 (1) Increase        **Decrease x**         
 (2) **Increase x**        Decrease         
 (3) Increase        **Decrease x**        (6pts)
22. Using the textural triangle on the back of the test, determine the textural class of a sample containing 30% clay, 40% silt and 30% sand. clay loam. (5pts)
23. Is the type of soil on this site (CoC) subject to wind erosion when cropped? **Yes**  
 If cropped, list three ways that a farmers could reduce wind erosion.  
 (1) Wind breaks.  
 (2) Buffer Strips (grass or shrubs). (8pts)  
 (3) Crop residues.
24. Using pacing techniques determine the distance between the flags. The change in elevation between the flags is four feet. What is the percent slope? 8% (6pts)
25. Five major factors largely influence the kinds of soil that develop in the world. What are the five factors:  
 (1) Climate.  
 (2) Living Organisms.  
 (3) Nature of Parent Material.  
 (4) Topography of area.  
 (5) Time. (10pts)

Tie Breaker:

Several days after it stops raining the downward movement of water in the soil essentially ceases. The soil is then said to be at Field Capacity. At this time soil Macropores are filled with air and soil Micropores are filled with water. (6pts)