

April 29, 2014

Area IV Envirothon
Procter Camp and Conference Center
11235 S.R. 38 SE
London, Ohio 43140

Soils

Pit Specific Questions

- 1. Soil texture affects the ability of a soil to hold and release nutrients, which is critical in the development of sustainable local agriculture. What is the texture of the topsoil?**
 - a. Clay
 - b. Sandy Clay
 - c. Loam
 - d. Silt Loam

- 2. Topsoil is a critical element in reducing erosion, nutrient runoff, and is also important in sustainable agriculture. What is the depth of topsoil in the soil pit?**
 - a. 0 to 4 inches
 - b. 4 to 8 inches
 - c. 8 to 12 inches
 - d. 12 to 16 inches

- 3. Structure of the soil directly affects the ability of soil to move and filter water. What is the structure of the topsoil in the soil pit?**
 - a. Massive
 - b. Single grained
 - c. Blocky
 - d. Granular

- 4. What is the structure of the soil at a depth of 24 inches in the soil pit?**
 - a. Massive
 - b. Single grained
 - c. Blocky
 - d. Granular

- 5. Redoximorphic features indicate the presence of seasonal saturation and occur in the forms of concentrations (red/orange colors), and depletions (gray colors). At what depth are redoximorphic features (gray colors) found in the soil pit?**
 - a. 0 to 12 inches
 - b. 12 to 24 inches
 - c. 24 to 36 inches
 - d. Greater than 36 inches or below bottom of the pit

6. **The solum is the upper part of the soil profile, (above the C horizon), in which the processes of soil formation are active. What is the depth of the solum in the pit?**
- 0 to 12 inches
 - 12 to 24 inches
 - 24 to 36 inches
 - Greater than 36 inches or below bottom of the pit
7. **Parent material is one of the forming factors that make up and influences the kind of soil that specific soil will be (soil pedon). What is the parent material of the soil in the soil pit?**
- Alluvium
 - Glacial till
 - Residuum
 - Outwash

Questions related to Soil Survey Packet

8. **Geographic information systems (GIS) have been a major advancement to the soil survey program, but also can cause misunderstanding of the detail in mapping and accuracy of the soil line placement. Soil survey maps were intended to be viewed at the scale that they were mapped at. What scale was the soil survey of Madison County mapped on?**
- 1 : 6,400
 - 1 : 12,000
 - 1 : 15,800
 - 1 : 50,000
9. **A soil complex is made up of 2 or more geographically located soils that can't be shown separately on a map. In the soil map unit MnB, what is the composition for the Eldean major component?**
- 5%
 - 10%
 - 35%
 - 50%
10. **A map unit on a soil map represents an area dominated by one or more major kinds of soil. However, not every soil within a map unit delineation acts the same in use and management. Thus, each map unit is developed to identify the major soils for which it is named and the minor components. Which of the following soil types is a minor component for the CsB – Crosby Lewisburg silt loams, 2 to 6 % slopes?**
- Odell
 - Crosby
 - Miamian
 - Lewisburg

- 11. Each letter/number in the soil map unit symbol (ie. MnC2) represents part of the soil map unit name. What does the number “2” in the map unit MnC2 stand for?**
- Second Miamian map unit in the county
 - Silt loam
 - Eroded
 - 6 to 12 percent slopes
- 12. Soil drainage is an important aspect of sustainable agriculture as crop roots typically won’t grow and produce sitting in stagnate water. What is the depth to the seasonal water table in Wt – Westland silty clay loam (in centimeters)**
- 15
 - 30
 - 61
 - >200
- 13. Permeability (Ksat) is the rate at which water moves through the soil within the soil profile. What is the Ksat capacity of the most limiting layer to transmit water in Pa – Patton silty clay loam?**
- Low
 - Moderately low
 - Moderately high
 - High
- 14. One of the many reasons that the cooperative soil survey decided to move to a digital platform was the ability to update soil survey information more efficiently, and for the ability to incorporate minor changes to county datasets. What is the date of the Soil Survey Area Data of the Custom Soil Resource Report?**
- February 1, 1979
 - January 27, 2010
 - April 24, 2013
 - January 2, 2014
- 15. The hydrologic soil group (HSG) refers to soil groups according to their runoff potential. What is the HSG for Ko?**
- A
 - C
 - C/D
 - B/D
- 16. Hydric soils are one of the 3 indicators that determine the identification of a wetland. Wetlands are protected through the Food Security Act of 1985. With Hydric soils being one of the indicators of a wetland, which soil type would be the most likely to contain a wetland?**
- OdB
 - CSB
 - Ko
 - MnB

General Questions

- 17. Many woodland owners have a simple goal or objective for their piece of property – they want to keep it healthy and thriving. Part of any land managers job is to formulate a plan that helps the landowner to achieve their goals and objectives. If keeping this woodland thriving and healthy is important what should the landowners do first?**
- Plant more trees
 - Remove all of the non-native invasive species
 - Harvest the mature trees in order to allow new trees to grow
 - Don't do anything at the moment, just let nature take its course
- 18. During summer months, many Ohio lakes and ponds will have a layer of water depleted of oxygen. Which of the following terms means “depleted of oxygen”?**
- Hyper-aerobic
 - Toxic
 - Hypobaric
 - Aerobic
 - Anoxic
- 19. The ideal slope for the shoreline of an Ohio farm pond should be which of the following ratios of run: increasing depth?**
- 15:1 which allows plenty of shallow areas for weed growth and cover for young fish
 - 1:1 gives a steep bank minimizing the amounts of weeds growing for more swimming room
 - 3:1 increases depth and is appropriate rate to allow for some weed growth for fish cover and at the same time makes most of the pond deep enough for large fish habitat and less weed growth.
- 20. Sometimes farmers will plant more than they need of a certain crop, usually along the outer edge of the same field where the cash crop is planted. The boarder planting is designed as a decoy for insects, which will be distracted from the cash crop. This technique is known as _____?**
- Trap cropping
 - Deception planting
 - Distraction cropping
 - Trick cropping
- 21. There are 12 different soil texture classes recognized in the USDA classification system. Which of the following is *NOT* a recognized texture class?**
- Clay
 - Silty Clay Loam
 - Clayey Loam
 - Sandy Clay

22. This parent material was deposited in lake water and exposed when the water level was lowered?

- a. Colluvium deposit
- b. Deatuvian deposit
- c. Outwash deposit
- d. Lacustrine deposit

23. If the soil survey shows a site as being somewhat limited for a land use, you would expect the site to:

- a. Perform well and require little maintenance
- b. Require special planning and moderate maintenance
- c. Perform poorly without major prep work and high maintenance
- d. Be condemned so the world doesn't come to an end.

24. Land capability classes show the suitability of soils for:

- a. Field Crops
- b. Building sites
- c. Wildlife habitat
- d. Woodlands

25. This term is another word for standing dead tree, a beneficial component for foraging and cavity nesting:

- a. snag
- b. sumac
- c. switch
- d. scar
- e. wolf