

## AREA IV ENVIROTHON-SOILS TEST

1. Soil particles naturally bond into larger aggregates. What term defines an individual soil aggregate?

- A. Pedon
- B. Ped
- C. Clump
- D. Soil separates

2. Which of the following has the largest influence on soil texture?

- A. Time
- B. Vegetation
- C. pH
- D. Parent material

3. Which soil characteristic would be most important when selecting a site for pond construction?

- A. Permeability
- B. ph
- C. Elevation
- D. Cation exchange capacity

4. Which farming practice is best for reducing soil erosion?

- A. Ridge tillage
- B. Conventional tillage
- C. No till
- D. Minimum tillage

5. Which of the following nutrients is a cation in soil?

- A. Sulfur
- B. Chlorine
- C. Molybdenum
- D. Potassium

6. The 4 Rights (4Rs) of sustainable management and plant nutrition is a practice developed to benefit both farmers and the environment. What are the four components of this practice?

- A. source, economics, environment, and time
- B. source, rate, time, and place
- C. time, place, rate, and environment
- D. time, environment, economy, and place

7. Most southeast Ohio was not affected by historic glacial activity. In comparison to glaciated parts of Ohio, soils in southeast Ohio are

- A. Less acidic
- B. Younger
- C. The same age
- D. Older

8. Which of the following soil properties has the smallest effect on a soil's ability to treat wastewater from a residential septic system?

- A. depth to bedrock
- B. drainage class
- C. pH
- D. permeability

9. What condition is of greatest concern for groundwater contamination if a septic system leach field is installed too close to it?

- A. Sand with a large amount of gravel
- B. Fragipan
- C. Dense glacial till
- D. A clay textured subsoil horizon

10. A fragipan is a loamy, brittle subsurface horizon low in porosity and is restricts plant rooting depth. Which combination of letters identifies the presence of a fragipan in the subsoil?

- A. Bg
- B. Bx
- C. Bw
- D. Bt

11. Soil color is described using a specific classification system called the Munsell notation. What component of the color 10YR/4/3 is the chroma?

- A. 10
- B. YR
- C. 4
- D. 3

12. Adequate sizing of a septic system is important to ensure proper function. Two soil properties used for determining the size of a system are:

- A. Cation exchange capacity and structure
- B. texture and color
- C. texture and structure
- D. structure and pH

13. Which of the following nutrients is the most mobile in soil?

- A. Phosphorus
- B. Nitrogen
- C. Potassium
- D. Calcium

14. Which of the following practices can maximize the efficiency of nitrogen fertilization in corn production?

- A. Fall broadcast application of dry fertilizer
- B. Spring pre-emergence broadcast spray of liquid fertilizer
- C. Summer post-emergence dribble band of liquid fertilizer
- D. Spring pre-emergence broadcast spray of liquid fertilizer

15. Which of the following statements best describes infiltration?

- A. Downward movement of water between soil horizons
- B. Downward movement of water into the soil surface
- C. Lateral movement of water throughout a soil horizon
- D. Deep movement of water into an aquifer

16. Which landscape position would be expected to have a convex slope?

- A. Shoulder
- B. Backslope
- C. Footslope
- D. Toeslope

17. Soils formed under this parent material in Ohio are typically the youngest.

- A. Glacial till
- B. Colluvium
- C. Residuum
- D. Alluvium

18. What term defines an organic layer commonly found in forests consisting of fallen plant material that is in the process of decomposition?

- A. Lignin
- B. Muck
- C. Cellulose
- D. Duff

19. Which microorganism is most responsible for the earthy smell of soil?

- A. Protozoa
- B. Bacteria
- C. Actinomycetes
- D. Algae

- A. Very poor drainage, formed in pine forest
- B. Presence of a fragipan, formed in prairie
- C. Deep rooting depth, formed in arid climate
- D. Presence of a fragipan, formed in deciduous forest

20. Glacial till is a common parent material in western and northern Ohio. Which statement best describes glacial till?

- A. Unsorted material deposited by rivers that formed under glaciers
- B. Stratified layers of sand and gravel deposited by glacial meltwater
- C. Unsorted, non-stratified material consisting of clay, silt, sand and boulders deposited by glacial ice.
- D. Material deposited by wind following retreat of the glaciers

These questions all pertain to the pit at the site:

21. At what depth is the root restrictive layer?

- A. Below the bottom of the pit
- B. 20"
- C. 30"
- D. 40"

22. How deep is the topsoil layer?

- A. 4"
- B. 7"
- C. 10"
- D. 14"

23. What is the texture of the subsoil in the bucket?

- E. Coarse
- F. Medium
- G. Moderately fine
- H. Fine

24. Mottling indicates a seasonal high water table. At what depth is mottling found?

- A. 8"
- B. 16"
- C. 24"
- D. 46"

25. The parent material consists of:

- A. Glacial till
- B. Glacial loess
- C. Glacial outwash
- D. Glacial washout