**2023 Area Envirothon Soils Test**

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1. Which of the following principal forms of soil is considered structureless?
   1. Columnar
   2. Granular
   3. **Massive**
   4. Prismatic
2. Which soil element can give soil a brown, yellow or red color?
   1. Copper
   2. **Iron**
   3. Manganese
   4. Zinc
3. Overly saturated soils can be mottled or completely gray in color.
   1. **True**
   2. False
4. By weight, which soil component makes up the smallest percentage of soil in both natural and compacted soils?
   1. Mineral Matter
   2. **Organic Matter**
   3. Soil Air
   4. Soil Water
5. Which soil horizon is also known as the substratum?
   1. “A” horizon
   2. “B” horizon
   3. **“C” horizon**
   4. “R” horizon
6. Which answer has the soil particles listed from the largest particle to the smallest particle?
   1. Clay, silt, sand
   2. **Sand, silt, clay**
   3. Sand, clay, silt
   4. Silt, sand, clay
7. Which soil particles tend to hold and absorb more water?
   1. **Clay**
   2. Sand
   3. Silt
8. Based upon the soil textural triangle, which of these soil textures contains the highest percentage of clay particles?
9. Clay loam
10. Loam
11. **Silty clay**
12. Silty clay loam
13. A soil that tests with a pH of 6.5 is described as.
    1. Neutral
    2. **Slightly acidic**
    3. Slightly alkaline
14. The percentage of slope for land with an 8-foot drop in 400 feet of horizontal distance is.
    1. 0.02
    2. **2**
    3. 5
    4. 50
15. The continental ice mass known as the Laurentide Ice Sheet covered approximately what percentage of Ohio during the early Pleistocene period?
    1. 100%
    2. **67%**
    3. 40%
    4. 25%
16. When building a compost pile made up of dried leaves and grass clippings, which fertilizer nutrient can be added to the pile if you run short of grass clippings?
    1. **Nitrogen**
    2. Phosphorus
    3. Potassium
    4. Sulfur
17. Which Nitrogen fertilizer contains the highest percentage of actual Nitrogen?
    1. Ammonium sulfate
    2. **Anhydrous ammonia**
    3. Urea
    4. Urea-ammonium nitrate (UAN)
18. How deep should you insert the soil probe when collecting soil samples for trees, shrubs, and vegetables?
    1. Less than 1 inch
    2. 2 to 4 inches
    3. **5 to 8 inches**
    4. 10 to 12 inches
19. Soil samples should not be collected in a.
    1. **Aluminum bucket**
    2. Cardboard box
    3. Plastic bucket
    4. Ziploc bag
20. To lower the soil pH, gardeners should add \_\_\_\_\_\_\_\_\_\_\_ to the soil.
    1. Gypsum
    2. Lime
    3. **Sulfur**
    4. Wood Ashes
21. Soil properties are developed through five principal soil forming factors. Which of the following is not a soil forming factor?
    1. Climate
    2. Relief
    3. Time
    4. **All of these are soil forming factors**
22. Material (sand, silt, or clay) that is deposited on land by flowing streams is called.
    1. **Alluvium**
    2. Colluvium
    3. Residuum
    4. None of the above
23. Which soil horizon is located closest to the soil surface?
    1. “A” horizon
    2. “B” horizon
    3. “C” horizon
    4. **“O” horizon**
24. Which metal caused soil contamination near roadways because of automobile emissions?
    1. Cadmium
    2. Copper
    3. **Lead**
    4. Nickel
25. Sedimentary rock formed by the hardening of a clay deposit is called.
    1. Aggregate
    2. Bedrock
    3. Sandstone
    4. **Shale**
26. Soils with parent material made up primarily of limestone are more likely to have a soil pH that is.
    1. Acidic
    2. **Alkaline**
    3. Limestone doesn’t affect soil pH
27. Erosion is the wearing away of the land surface by water, wind, ice, or other geologic agents. Erosion that occurs mainly because of human or animal activities is known as.
    1. **Accelerated erosion**
    2. Geologic erosion
    3. Natural erosion
    4. None of the above
28. An ion carrying a positive charge of electricity is known as a.
    1. Catena
    2. **Cation**
    3. Dogion
    4. Hydro ion
29. Which of the following nutrients is not obtained primarily from air and water?
    1. **Boron**
    2. Carbon
    3. Hydrogen
    4. Oxygen