

2022 OHIO AREA V ENVIROTHON QUESTIONS – Soils

Please use a pencil to complete your answer sheet

DO NOT WRITE ON THIS TEST

- 1) According to figure 3 of the Ross County Soil Survey; what Bedrock is most prevalent along Ross counties Eastern boarder
 - a. Allegheny and Pottsville Groups, Undivided
 - b. Peebles Dolomite, Lilley Formation, and Bisher Formation, Undivided
 - c. Sunburry Shale, Berea Sandstone, and Bedford Shale
 - d. Maxville Limestone, Rushville Formation, Logan formation and Cuyohoga Formation, Undivided

- 2) According to the detailed soil maps, the putt-putt course is located in what soil type?
 - a. Clifty Silt Loam
 - b. Shelocta – Brownsville association, very steep
 - c. Pike Silt Loam
 - d. Kokomo Silt loam

- 3) What soil particle has the largest surface area per volume?
 - a. Clay
 - b. Silt
 - c. Sand
 - d. Ped

- 4) _____ is a compact dense layer of soil that impedes the movement of water and the growth of roots.
 - a. Bedrock
 - b. Pan
 - c. Sediment
 - d. Riser

- 5) pH value is
 - a. A numerical value used to designate the acidity or alkalinity in soil
 - b. The ability of a soil to allow air and water to move downward
 - c. The measurement of how weathered a soil is
 - d. The measure of the plasticity of a soil

- 6) _____: The unconsolidated mantle of weathered material on earth surface; the loose earth material above solid rock.
 - a. Horizon
 - b. Regolith
 - c. Sediment
 - d. Alluvium

- 7) Soil texture refers to the relative proportion of three constituents What are the three constituents.
- Silt, clay loam
 - Loam, clay, sand
 - Sand, silt, clay
 - Clay, Loam, Sand
- 8) According to the Ross County Soil survey the valley we are in is within the Cp map unit, if someone wanted to use this for cropland what would the main limitation for this soil
- Occasional flooding, surface compaction, moderate ground water pollution
 - No limitations or hazards
 - Surface compaction, frost action, surface crusting
 - Flooding, erosion, fair tilth, erosion hazard
- 9) Our testing site is surrounded by the soil map unit SgF Map unit. This map unit refers to
- Stonelick Loam occasionally Flooded
 - Shelcota-Rigley Association very steep
 - Shelcota Brownsville association, very steep
 - Clifty Silt Loam
- 10) The soil map unit SgF has limited suitability for -Building site Development – what is the greatest concern for shallow excavation
- Slope
 - Depth to hard bedrock
 - Cutbanks caving
 - Depth to saturated zone
- 11) BgC – Berks Tar Hollow Complex, 6-15 percent slopes in Tar Hollow have a Cation Exchange Capacity of ____? (See resource Packet)
- 5-15 milliequivalents per 100 grams
 - 20 milliequivalents per 100 grams
 - 5-10 milliequivalents per 100 grams
 - 25-30 milliequivalents per 100 grams
- 12) This special symbol (.) represents what on a soil map sheet?
- Road
 - Stream
 - Short steep slope
 - Out building
- 13) Most Soils are _____ charged
- Positively
 - Ionicly
 - Negatively
 - Neutrally

14) CEC refers to which of the following?

- a. Clay elasticity correction
- b. Cation exchange capacity
- c. Colluvium erosion count
- d. Calcium equivalent capacity

15) Typically, _____ charged nutrients or anions are poorly held to soil particles and are prone to leaching.

- a. Positively
- b. Ionically
- c. Negatively
- d. Neutrally

16) Soils with **low** CEC ratings require _____ applications of fertilizer for efficient use.

- a. Small and frequent
- b. Large and frequent
- c. Large and infrequent
- d. Small and infrequent

17) The ratio of _____ dictates a soil's, color, texture, capacity to hold water and nutrients.

- a. Clay, water, silt, and sand
- b. Clay, sand, silt, and organic matter
- c. Organic matter, silt sand, and parent material
- d. Clay, organic matter, depth of soil

18) The soil pit depicts the _____ horizons

- a. O, a, b,
- b. O, a, e, and R
- c. O, a no c and R
- d. O, and R

19) There is a Fragipan at _____ inches?

- a. 6
- b. 50
- c. 30
- d. No fragipan visible

20) The depth of the O horizon is _____ inches?

- a. 0-2
- b. 12-20
- c. 2-4
- d. 6-10

21) The texture class of the soil below 48"

- a. Loam
- b. Sand
- c. Silty loam
- d. Clay

22) What is the structure of the soil in the pit between 20 and 30 inches?

- a. Prismatic
- b. Angular Blocky
- c. Granular
- d. Single Grained

23) What is the surface texture of the Pit?

- a. Sand
- b. Loam
- c. Silty Clay Loam
- d. Clay

24) Considering forestland regeneration activities; the soil at this site has a ___ suitability for mechanical planting.

- a. Low
- b. Moderate
- c. Unsited
- d. Moderate

25) Ross County lays within two distinct topographic provinces the, _____.

- a. Ohio Valley and glaciated Allegheny plateau
- b. Interior Iowa Plateaus and Caledonian outflow
- c. Appalachian Plateau and glaciated Central Lowlands Province
- d. Glaciated Allegheny plateau, and Ohio valley