Test 2013

Site Specific Questions (#1 - #7)

1. One of the most important soil characteristics affecting plant growth is the rooting zone of the topsoil. What is the depth of topsoil in the soil pit?

a. 0 to 2 inches

b. 2 to 4 inches

c. 4 to 10 inches

d. 10 to 15 inches

2. Structure of the soil directly affects the ability of a plant to move and filter water throughout the soil. What is the structure of the surface horizon in the soil pit?

a. Massive

b. Single grained

c. Blocky

d. Granular

3. 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?

a. 0 to 10 inches

b. 10 to 20 inches

c. 20 to 30 inches

d. Greater than 30 inches or below bottom of the pit

4. What is the surface texture of the soil in the pit?

a. Clay

b. Sandy loam

c. Silty clay

d. Silt loam

5. What is the structure of the soil in the pit between 10 to 20 inches?

a. Blocky

b. Prismatic

c. Granular

d. Single-grained

6. Redoximorphic depletions (gray mottles) are used to indicate the presence of a water table. At what depth do redoximorphic depletions occur in the soil pit?

a. 0 to 10 inches

b. 10 to 20 inches

c. 20 to 30 inches

d. Greater than 30 inches or below the bottom of the pit

7. What is the texture class of the soil in the pit between 10 to 20 inches?

a. Silt loam

b. Sandy loam

c. Sandy clay

d. Silty clay

General Questions (#8 - #25)

8. One key concept of the Web Soil Survey is the AOI. In regard to Web Soil Survey, what does the acronym AOI stand for?

a. Availability of Information

b. Automated Optical Inspection

c. Automatic Operator Interface

d. Area of Interest

9. The soil Glynwood silt loam, 2 to 6 percent slopes is represented by what map unit symbol?

a. BoB

b. GwB

c. Gwg5C2

d. Pm

10. There are 12 different soil texture classes recognized in the USDA classification system. Which of the following is not a recognized texture class?

a. Silt Loam

b. Sandy Loam

c. Loamy Sand

d. Loamy Silt

11. 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 Mercer County mapped on?

a. 1:4,420

b. 1:8,000

c. 1:15,840

d. 1:16,000

12. The Custom Soil Resource Report for Mercer County, Ohio contains a soil map with an AOI encompassing the Envirothon site. Which map unit comprises the largest percentage of this AOI?

a. Blount silt loam

b. Glynwood silt loam

c. Glynwood clay loam

d. Pewamo silty clay loam

13. The Custom Soil Resource Report for Mercer County, Ohio contains a Dwellings and Small Commercial Building Report. The Rating Class for Small commercial buildings on Blount silt loam is given as “Somewhat Limited”. What is the most limiting feature of the Blount silt loam soil for Small commercial buildings?

a. Shrink-swell

b. Slope

c. Depth to saturated zone

d. Ponding

14. According to the Land Capability Classification in the Custom Soil Resource Report, which map unit has “severe limitations that restrict the choice of plants or that require special conservation practices, or both”?

a. BoB

b. GwB

c. Gwg5C2

d. Pm

15. According to the Land Capability Classification in the Custom Soil Resource Report, which map unit has a limiting condition for crop growth that could be partly corrected by artificial drainage?

a. BoB

b. GwB

c. Gwg5C2

d. Pm

16. Soil texture is determined by measuring the relative proportions of three particle size ranges. Which of the following is not a particle size range?

a. Sand

b. Loam

c. Silt

d. Clay

17. Soil particles in the \_\_\_\_\_\_ particle size range are the most chemically reactive.

a. Sand

b. Loam

c. Silt

d. Clay

18. The soils of Ohio can be divided into four large groups based on the underlying parent material. Which type of soils are we in today?

a. Soils formed in Glacial Lake Sediments

b. Soils formed in Wisconsin Age Glacial Drift

c. Soils formed in Illinoian Age Glacial Drift

d. Soils formed in Unglaciated Sandstone and Shale

19. Soil particles are divided into size classes. Which answer below is the correct order of particle sizes, listed from largest to smallest:

a. Sand – Silt – Clay

b. Clay – Silt – Sand

c. Sand – Loam – Clay

d. Sand – Silt – Loam

20. Land capability classes shows the suitability of soils for:

a. Field Crops

b. Building sites

c. Wildlife habitat

d. Woodlands

21. There are five soil forming factors. Which answer below correctly lists all five factors?

a. Climate, Biology, Topography, Parent Material, and Time

b. Climate, Biology, Topography, Parent Material, and Additions

c. Climate, Biology, Additions, Parent Material, and Time

d. Earth, Wind, Fire, Ice, and Life

22. Soils typically occur in an orderly pattern that is related to geology, landforms, relief, climate, and natural vegetation. What “landform” does the Pewamo soil series occur on?

a. Stream terrace

b. Ground moraine

c. Flood plain

d. Lake plain

23. Before using a soil map, it is important to consider why the map was created. What is the objective of soil mapping?

a. To delineate pure taxonomic classes of soils

b. To separate the landscape into landforms or landform segments that have similar use and management requirements

c. To identify the crop yield potential of land for the calculation of taxation rates

d. To allow soil scientists to walk the earth - like Caine in Kung Fu

24. Soil is a naturally occurring mixture of mineral and organic ingredients with a definite form, structure, and composition. While the exact composition of soil changes from one location to another, which of the following represents the average composition by volume of the major soil ingredients:

a. 45% Water, 25% Air, 5% Organic matter, 25% Minerals

b. 25% Water, 25% Air, 25% Organic matter, 25% Minerals

c. 25% Water, 5% Air, 25% Organic matter, 45% Minerals

d. 25% Water, 25% Air, 5% Organic matter, 45% Minerals

25. Rangeland health and soil quality are interdependent. Rangeland health is characterized by the functioning of both the soil and the plant communities. The capacity of the soil to function affects ecological processes. Which of the following is not a major ecological process performed by soil:

a. the capture, storage, and redistribution of water

b. supporting the growth of plants

c. the capture of solar energy

d. the cycling of plant nutrients

2012 Test

Site Specific Questions 1-5

1. Topsoil is a critical element in reducing nonpoint source pollution, and is also important in the effectiveness of LIDs. What is the depth of topsoil in the soil pit?

A. 0 to 2 inches

B. 2 to 4 inches

C. 4 to 10 inches

D. 10 to 15 inches

2. Soil texture affects the ability of a soil to hold and release nutrients. What is the texture of the topsoil?

A. Clay

B. Sandy Clay

C. Loam

D. Silt Loam

3. What is the texture of the Subsoil at a depth of 18 inches?

A. Clay

B. Clay Loam

C. Silty Clay Loam

D. Silty Clay

4. Structure of the soil directly affects the ability of soil to move and filter water. What is the structure of the substratum in the soil pit?

A. Massive

B. Single grained

C. Blocky

D. Granular

5. 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?

A. 0 to 10 inches

B. 10 to 20 inches

C. 20 to 30 inches

D. Greater than 30 inches or below bottom of the pit

6. Soil Surveys are made to?

A. Provide inventory of soils for purpose of taxation.

B. Provide information about soils and miscellaneous areas of an area.

C. Understand the geology of an area.

D. Understand the complexity of our land.

7. Soil Survey information is provided in a variety of formats. Which of the following formats would contain the most current and up to date information?

A. USDA Websites, “Soil Data Mart”, and “Web Soil Survey”

B. Soil CD’s and DVD’s

C. Soil Survey booklet

D. All of the above

8. What agency helped provide the Preble County Soil Survey Information?

A. USDA Natural Resources Conservation Service

B. Ohio Agriculture Research and Development Center

C. Ohio Department of Natural Resources

D. All of the above

9. 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 Preble County mapped on?

A. 1 : 4,930

B. 1 : 15,840

C. 1 :12,000

D. 1 : 253,440

10. This Envirothon soil pit site is located on the edge of a soil map unit that has “MfB2” for the map symbol. What soil does the symbol, MfB2, represent?

A. Miamian silt loam, 6 to 12 percent slopes, eroded

B. Miamian-Celina silt loams, 6 to 12 percent slopes, eroded

C. Miamian silt loam, 2 to 6 percent slopes, eroded

D. Miamian-Celina silt loams, 2 to 6 percent slopes, eroded

11. According to the “Acreage and Proportionate Extent of the Soils Table”, how many acres of Preble County does the symbol “MfB2” represent?

A. 23.7

B. 18,395

C. 30.9

D. 8,311

12. Soil quality plays an important role in minimizing/eliminating non point source pollution. What is soil quality?

A. How soil particles are arranged.

B. The composition of sand, silt, and clay

C. Capacity of a specific kind of soil function.

D. The “soil series” of an area.

13. There are 5 essential functions that soil performs in the environment. Which of the following essential functions would have the smallest impact on non point source pollution?

A. Supporting structures

B. Filtering potential pollutants

C. Regulating water

D. Cycling nutrients

14. What is a soil ped?

A. An individual natural soil aggregate

B. A group of rock fragments in the soil

C. There is no such thing as a soil ped

D. A group of natural soil aggregates

15. Stonelick soil formed in alluvium. What phrase best describes alluvium material?

A. Material that has moved from upslope

B. Material that weathered in place

C. Water deposited material

D. Wind blown silt material

16. Soils typically occur in an orderly pattern that is related to geology, landforms, relief, climate, and natural vegetation. What “landform” is the Miamian soil series occur on?

A. Stream terrace

B. Till plain

C. Flood plain

D. Lake plain

17. The hydrologic soil group (HSG) refers to soil groups according to their runoff potential. HSG is an interpretation that is very useful when considering non point source pollution. What is the HSG for MfB – Miamian soil series?

A. A

B. B

C. C

D. D

18. Which of the following soils has the highest average yield per acre of soybeans under high level of management?

A. MeC2

B. MfB2

C. MfB

D. HeF2

19. One of the common parent materials found in Ohio is Loess. What phrase best describes Loess?

A. Wind blown sand material

B. Material that weathered in place

C. Water deposited material

D. Wind blown silt material

20. Infiltration plays a large role in non point source pollution. Which statement below best describes soil infiltration?

A. Water flow through the subsoil

B. Physical characteristics of the soil

C. Downward entry of water into the immediate soil surface

D. Inherent soil quality

21. The Miamian soil series is unofficially considered to be the State Soil of Ohio. Which description best describes the Miamian soil series?

A. Soil formed in a thin layer of Loess and the underlying till

B. Soil formed in loamy alluvium

C. Soil formed in loess and the underlying residuum (bedrock)

D. Soil formed in lake plain, lacustrine sediments

22. Which of the following statements best describes the “A” horizon of soil?

A. The mineral horizon or layer, excluding indurated bedrock that is little affected by soil forming processes

B. The mineral horizon in which the main feature is loss of silicate clay, iron, aluminum, or some combination of these.

C. An organic layer of fresh decaying plant residue.

D. The mineral horizon at or near the surface in which an accumulation of humified organic matter is mixed with mineral material.

23. Wynn soil formed in Residuum. What phrase best describes Residuum material?

A. Material that has moved from upslope

B. Material that accumulated as consolidated rock in place

C. Water deposited material

D. Wind blown silt material

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

A. Colluvium deposit

B. Lacustrine deposit

C. Deatuvian deposit

D. Outwash deposit

25. If a person was not familiar with Preble County and had very limited time, and this person wanted a quick snap shot of the soils of the county, which of the following would be the best suggestion?

A. Look through each soil mapsheet and then read the soil descriptions

B. Read page 1 of the Preble County soil survey

C. Look at the index of the soil survey

D. Review the general soil map and descriptions

2010 Test

1. Protection of groundwater is directly related to the type of soil and its ability to accept and filter surface water through infiltration. One of the most important soil characteristics affecting infiltration is the depth of the topsoil. What is the depth of topsoil in the soil pit?

A. 0 to 2 inches

B. 2 to 4 inches

C. 4 to 10 inches

D. 10 to 15 inches

2. Nutrient runoff is a source of groundwater contamination. Soil texture affects the ability of a soil to hold and release nutrients. What is the texture of the topsoil?

A. Clay

B. Sandy Clay

C. Loam

D. Silt Loam

3. What is the texture of the Subsoil at a depth of 20 inches?

A. Clay

B. Clay Loam

C. Silty Clay Loam

D. Silty Clay

4. Structure of the soil directly affects the ability of a plant to move and filter water throughout the soil. What is the structure of the surface horizon in the soil pit?

A. Massive

B. Single grained

C. Blocky

D. Granular

5. 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?

A. 0 to 10 inches

B. 10 to 20 inches

C. 20 to 30 inches

D. Greater than 30 inches or below bottom of the pit

6. The soil Fincastle silt loam, 2 to 6 percent slopes is represented by what map unit symbol?

A. FdB

B. FcB2

C. FlD

D. FcB

7. The town of Jacksonburg in northern Butler County is located on which soil association?

A. Russell-Miamian-Wynn Association

B. Wynn-Eden Association

C. Xenia-Wynn-Russell Association

D. Fincastle-Ragsdale-Xenia Association

8. What is the largest map unit in acreage in the Butler County Soil Survey?

A. EcE2, Eden silty clay loam, 15 to 25 percent slopes, moderately eroded

B. PrB, Princeton sandy loam, 2 to 8 percent slopes

C. WyC2, Wynn silt loam, 6 to 12 percent slopes, moderately eroded

D. Ra, Ragsdale silty clay loam

9. Which phrase best describes the Rossmoyne soil series?

A. Well drained

B. Moderately well drained

C. Very poorly drained

D. Poorly drained

10. Each letter in the soil map unit symbol (ie. EcF2) represents part of the soil mapunit name. What does the letter F in the map unit EcF2 stand for?

A. Moderately eroded

B. 25 to 50 percent slopes

C. Severely eroded

D. 15 to 25 percent slopes

11. Which of the following soils has the highest average yield per acre of Winter Wheat under high level of management?

A. Ragsdale: Ra

B. Warsaw: WbA

C. Landes: La

D. Eel: Ee

12. What is the suitability for septic tank absorption fields for OcA: Ockley silt loam, 0 to 2 percent slopes?

A. Not Limited

B. Somewhat Limited

C. Very Limited

D. Not Rated

13. The Miamian soil series is unofficially considered to be the State Soil of Ohio. Which description best describes the Miamian soil series?

A. Soil formed in silty loess over loamy till

B. Soil formed in loamy alluvium

C. Soil formed in loess and the underlying residuum (bedrock)

D. Soil formed in lake plain, lacustrine sediments

14. This Envirothon soil pit site is located on the edge of a soil map unit that has "MsC2" for the map symbol. What soil does the symbol, MsC2, represent?

A. Miamian silt loam, 6 to 12 percent slopes, moderately eroded

B. Miamian clay loam, 6 to 12 percent slopes, moderately eroded

C. Miamian silt loam, 12 to 18 percent slopes, moderately eroded

D. Miamian-Russell silt loams, 6 to 12 percent slopes, moderately eroded

15. The US Army Corps of Engineers is charged with delineating wetlands. What features do they use to positively identify an area as a wetland?

A. Land permanently covered by shallow water, hydraulic soils, and hydroponic plants

B. Land seasonally covered by shallow water, hydric soils, and hydrophytic plants

C. Land seasonally or permanently covered by shallow water, hydraulic soils, and hydroponic plants

D. Land seasonally covered by shallow water, hydric soils, and hydrophytic plants

E. Land seasonally or permanently covered by shallow water, hydric soils, and hydrophytic plants

16. What makes a well go dry?

A. Decreased porosity of the rocks in the aquifer

B. Withdrawing water from the ground at a faster rate that it is replenished

C. Decreased impervious surfaces on the landscape

D. Global warming

E. Changes in subsurface water pressure

17. What does conductivity measure?

A. Suitability of water for domestic, industrial, and agricultural uses

B. Amount of dissolved material in the water

C. Unpleasant taste or odor in drinking water

D. Deterioration of plumbing fixtures and appliances

E. Ability of water to stop an electrical current

18. Which type of soil is best suited for black willow?

A. Xeric

B. Poorly drained

C. Well drained

D. Excessively well drained

19. What is the theory and practice of controlling the establishment, composition, growth, and quality of a forest stand to achieve management objectives?

A. Crop tree release

B. Wildlife management

C. Forest management

D. Silviculture

20. Trees reduce soil erosion because\_\_\_\_\_\_\_\_\_

A. their leaves intercept raindrops and helps slow and disperse water more evenly.

B. tree roots compact soil .

C. trees have no positive effect on soil erosion.

D. small crown.

21. Installing an aerator in the entrance pond to Voice of America Park will produce the following benefits:

A. Keeps the water oxygenated for fish

B. Reduces narrow leaf cattail growth in the pond

C. Makes the bluegill grow larger, limits the growth of the largemouth bass

D. All of the above

22. Certain species of plants are required for butterflies to lay their eggs on. These plants are known as:

A. Ditch weeds

B. Wildflowers

C. Host plants

D. Invasive plants

23. A vernal pool is . . .

A. A place where people go to swim.

B. Shallow, temporary woodland pools used by amphibians

C. A man-made pond for waterfowl

D. A large, deep pool used for fishing

24. The Great Miami Buried Valley Aquifer (GMBVA) was formed about 2 million years ago due to waves of melting glaciers. What was the 'glacial till' it carried composed of?

A. Large boulders

B. Rock, sand and gravel

C. A large volume of soil

D. Chunks of heavy ice.

25. The EPA has designated the GMBVA a sole source aquifer. What does this designation signify?

A. The water comes from one sole source.

B. The aquifer is replenished from one source.

C. It is the sole source of drinking water for the designated area.

D. The EPA uses this source as its only one for contaminant testing.

2009 Test

1. Permeability is the quality of the soil that enables water to move downward through the soil. Which of the following soil properties does not affect permeability?

A. Soil texture

B. Distribution of pore sizes

C. Soil Structure

D. Percolation

2. Which term best describes an Ap Horizon?

A. Subsoil

B. Solum

C. Plow layer

D. Regolith

3. Soil drainage class refers to the depth of water saturation in a soil profile that existed under natural conditions. The soil at the pit is in which USDA soil drainage class?

A. Somewhat poorly drained

B. Moderately well drained

C. Well drained

D. Very poorly drained

4. The Ice Age in Ohio is expressed mainly by which of the following glacial periods:

A. Illinoian

B. Kansan

C. Wisconsian

D. None of the above

5. Parent material and topography are factors which influence soil formation. Which landform does the soil at the pit occupy?

A. Floodplain

B. Terrace

C. Ground Moraine

D. End Moraine

6. The solum of a soil contains the "true soil" in which roots grow and the processes of soil development occur. What is the depth of the solum in the soil at the pit?

A. 30 inches

B. 36 inches

C. 45 inches

D. over 60 inches

7. The structure of a soil involves the shape, grade and size of soil aggregates found in the soil. It is an important indicator of soil quality. What is the structure of the soil at the pit between 15 and 25 inches deep?

A. Granular

B. Platy

C. Subangular blocky

D. Prismatic

8. Soil texture affects water holding capacity, nutrient retention, permeability of water and other soil functions. These functions determine a soils suitability to land uses. What is the soil texture between 25 and 30 inches deep in the pit?

A. Silt loam

B. Clay loam

C. Silty clay loam

D. Clay

9. Eluviation and illuviation are terms that refer to:

A. The rapid decomposition of minerals into the soil structural units

B. Leaching of minerals and soil particles and subsequent deposition into the horizons below

C. Terms used to enhance water holding capacity

D. Differentiation of soils into taxonomic classes

10. The soil is often an overlooked yet important component of our urban infrastructure. Which of the following would not promote soil conservation on construction sites?

A. Regulating runoff of storm water

B. Limiting soil compaction

C. Implementing erosion control practices

D. Correcting soil related problems after they occur

11. What are the 5 factors that are involved in soil formation?

A. Climate, relief, parent material, time, living organisms

B. Parent material, climate, relief, organic material, drainage

C. Climate, texture, drainage, organic material, parent material

D. Parent material, time, relief, living organisms, structure

12. Soil formed from deposits of lake sediments is commonly called this parent material.

A. Loess

B. Colluvium

C. Lacustrine

D. Alluvium

13. What is the primary compound that gives soil it's brown or "rust" color?

A. Iron

B. Aluminum

C. Manganese

D. Sulfur

14. The General Soil Map shows four associations along US 33. Which soil associations below are found on this Honda site?

A. 1, 2 and 3

B. 1, 2 and 6

C. 1, 2 and 10

D. 6, 9 and 8

15. Soils formed under wet conditions that have slow permeability and the capacity to store and sustain desired water levels provide the best opportunities for wetland restoration. What name has been given to these wetland soils?

A. Hydrophytic soils

B. Clay based soils

C. Hydric soils

D. Muck soils

16. Which of the following is a term to designate the quality of a forest soil based on the height of the dominant trees at an arbitrarily chosen age? For example, the average height of dominant trees at age 50 is 75 feet.

A. Soil productivity value

B. Tree growth indicator

C. Height variable

D. Site index

17. What soil horizon would you expect the most soil microbiologic activity

to occur?

A. A

B. B

C. C

D. E

18. Farmers can manage their operations to sequester (store) more carbon, thereby slowing climate change by all measures below except:

A. Planting cover crops

B. Applying manure to cropland

C. Clearing woodlands

D. Restoring wetlands

19. Which one of the following statements best describes a soil map unit description in the soil survey?

A. Any soil profile in the map unit will look the same as the typical profile

B. The description gives the soils representative suitability to a land use

C. Any soil profile in the map unit is equally suited to a certain land use

D. The description explains all the management concerns of a home-site

20. Historically Ohio farm landscapes were separated into fields by numerous brushy fencerows and hedges. This type of habitat is called?

A. Openland habitat

B. Woodland habitat

C. Wetland habitat

D. Field habitat

21. When a crop field is not fall plowed after harvest the crop residue reduces the amount of soil erosion caused by rain and wind. Which statement is also true about crop residue?

A. It provides excellent winter cover for wildlife

B. It provides food for wildlife in the form of waste grain

C. It causes excessive debris in Ohio's streams

D. It increases wind erosion

22. Tree species recommended for establishment on various soil map units are grouped by natural soil drainage. Which species below would not be recommended on NaB, Nappanee silt loam?

A. Eastern white pine

B. White ash

C. Black walnut

D. Baldcypress

23. A soil's quality for any land use is assessed by comparing it to a "reference soil condition", and indicators of soil quality. Which soil property below is the least useful as an indicator of soil quality?

A. Soil organic matter (SOM)

B. Infiltration

C. Bulk density (BD)

D. Soil color

24. The variety of life on Earth, its biological diversity (ecosystems) is commonly referred to as biodiversity. Looking at the different station locations throughout this area how many different ecosystems do you see?

A. 1

B. 2

C. 3

D. 4

25. Using the soil textural triangle provided at the soil pit what is the texture of a soil with 20 percent silt, 30 percent clay, and 50 percent sand?

A. Sandy loam

B. Loam

C. Sandy clay loam

D. Clay loam

2008 Test

1. Parent material and topography are factors that influence soil formation. Which landform does the soil at the pit occupy?

A.Floodplain

B. Terrace tread

C. Upland hillslope

D. Upland flat

2. The landscape position and parent material of a soil suggest the soil layers likely to be found in the soil. This fact is useful for making land use decisions. The parent materials of the soil at the pit is:

A.Loess over glacial fill

B. Loess over outwash

C. Outwash

D. Alluvium

 3. Soil drainage class refers to the depth of water saturation in a soil profile that existed under natural conditions. The soil at the pit is in which USDA soil drainage class?

A.Somewhat poorly drained

B. Moderately well drained

C. Well drained

D. Very poorly drained

4. Soil compaction reduces the amount of water that can be stored in the soil or for supplying aquifer recharge. Which factor below is not significant for causing compaction?

A. Repeated machinery traffic over farmland

B. No-till planting of crops at optimum moisture content

C. Heavy equipment traffic over soils

D. Equipment traffic on wet soils

5. The solum of a soil contains the “true soil” in which roots grow and the processes of soil development occur. What is the depth of the solum in the soil at the pit?

A. 30 inches

B. 36 inches

C. 41 inches

D. over 60 inches

6. The structure of a soil involves the shape, grade and size of soil aggregates found in the soil. It is an important indicator of soil quality. What is the structure of the soil at the pit between 25 and 30 inches deep?

A. Granular

B. Platy

C. Subangular blocky

D. Prismatic

7. Adding new organic matter to the soil every year is important to maintaining soil quality. Which outcome of those listed below is least beneficial to water storage and availability in the soil?

A. Improved soil structure

B. Enhanced nutrient holding capacity

C. Enhanced water holding capacity

D. Soil protected from compaction

8. How many factors are involved in soil formation?

A. 5

B. 6

C. 3

D. 4

9. Name one of the processes of soil formation by which horizons are formed

A. Shrinking and swelling

B. Erosion

C. Loss

D. Alluvium

10. Fish species found in a body of water can often be an indicator of the water quality of that body of water. If you were to take a fish sampling of a stream, what species would you look for to decide this is a good quality stream?

A. White Sucker

B. Rainbow Darter

C. Creek Chub

D. Carp

11. The Soil Survey gives much information on the suitability of soils for land uses. If the soil at the pit is AvA, Avonburg silt loam it is poorly suited for all uses below except:

A. To grow hardwood trees

B. To grow coniferous woody plants

C. To support camping areas

D. To filter septic tank leachate

12. The Soil Survey of Warren County says that the kinds of wildlife living in an area depends on all three factors below except:

A. Land use

B. Patterns of vegetation

C. Climate

D. Distribution of water

 13. The General Soil Map shows three associations within the Little Miami Valley near CampKerns. Which soil associations below are found at this camp?

A. 1, 2 and 4

B. 1, 3 and 4

C. 1, 2 and 6

D. 1, 2 and 5

14. Soils formed under wet conditions that have slow permeability and the capacity to store and sustain desired water levels provide the best opportunities for wetland restoration. What name has been given to these wetland soils?

A. Hydrophytic soils

B. Clay based soils

C. Hydric soils

D. Muck soils

15. Forestry Best Management Practices (BMPs) were established mainly to minimize:

A. the spread of invasive species

B. soil erosion

C. wind damage

D. forest fires

16. If a flat woodland soil has a shallow rooting zone and is saturated which of the following hazards is most likely?

A. windthrow

B. erosion

C. lightning damage

D. slippage

17. Which one of the following statements is true of a Soil Series description in the Soil Survey?

A. Any soil profile of the series will look the same as the typical profile.

B. The description is representative of the series in the county.

C. Any soil profile of the series is equally suited for a certain land use.

D. The description explains all the management concerns of a home site.

18. Which of the following will increase the dissolved oxygen (D.O.) of Lake on a sunny day in May?

A. Sandbar willow

B. Zooplankton

C. Weeping willow

D. Phytoplankton

19. Farmers can manage their operations to sequester (store) more carbon, by all measures below except:

A. Planting cover crops

B. Applying manure to cropland

C. Clearing woodlands

D. Restoring wetlands

20. Agricultural producers may increase emissions of greenhouse gases by which management practice below?

A. Limiting the number of field operations

B. Applying nitrogen on fields only when needed

C. Using conventional tillage

D. Using digesters and covers on animal waste lagoons

21. Historically Ohio farm landscapes were separated into fields by numerous brushy fencerows and hedges. This type of habitat is beneficial to certain upland wildlife. Which of the following animals are considered to be upland game species that utilize brushy field dividers?

A. Cottontail rabbit, Bobwhite quail, Ring-necked pheasant

B. Chipmunk, Eastern bluebird, Box turtle

C. American coot, Hooded merganser, Mallard

D. Woodchuck, Woodcock, Wood duck

22. What is another name for water table?

A. Impervious layer

B. Bed rock

C. Water fall

D. The top of the zone of saturation

23. If the dominant vegetation on a forest site was pitch pine, scarlet oak, and

 blueberries, what would that tell me about the soil and site?

A. there is little moisture and the soil is high pH

B. there is little moisture and the soil is low pH

C. there is plentiful moisture and the soil is high pH

D. there is plentiful moisture and the soil is low pH

24. Recreational areas which are properly planned can provide all the below except what?

A. more green space

B. increase wildlife habitat

C. provide filter strips to improve water quality

D. more areas to dump trash

25. Practices that enhance infiltration of water into the soil protect streambanks and buffer areas. This promotes aquifer recharge with water and slows soil erosion. Evaluation of land uses for infiltration is done best by:

A. Studying soil descriptions

B. Analyzing plant populations

C. On-site soil investigations

D. Examination of soil maps

2007 Test

1. Topsoil depth is a measure of soil quality. What is the depth of topsoil to the nearest five inches of the soil at the pit?

A. 5 inches

B. 10 inches

C. 15 inches

D. 20 inches

2. Parent material and topography are factors which influence soil formation. Which landform does the soil at the pit occupy?

A. Floodplain

B. Terrace tread

C. Upland hillslope

D. Upland flat

3. The solum of a soil contains the “true soil” in which roots grow and the productivity for growing alternative fuel producing crops exists. What is the depth of the solum in the soil at the pit?

A. 35 inches

B. 40 inches

C. 50 inches

D. 55 inches

4. The landscape position and parent material of a soil suggest the soil layers likely to be found in the soil. This fact is useful for making land use decisions. The parent material of the soil at the pit is:

A. Alluvium

B. Loess

C. Glacial outwash

D. Glacial till

5. Soil texture affects water holding capacity, nutrient retention, permeability of water and other soil functions. These functions determine a soils suitability to enhance renewable fuel production. What is the soil texture between 25 and 30 inches deep in the pit?

A. Silt loam

B. Loam

C. Silty clay loam

D. Clay

6. Soil drainage class refers to the depth of water saturation in a soil profile that existed under natural conditions. The soil at the pit is in which USDA soil drainage class?

A. Somewhat poorly drained

B. Moderately well drained

C. Well drained

D. Very poorly drained

7. The structure of a soil involves the shape, grade and size of soil aggregates found in the soil. It is an important indicator of soil quality. What is the structure of the soil at the pit between 15 and 20 inches deep?

A. Granular

B. Platy

C. Subangular blocky

D. Massive

8. The Soil Survey gives much information on the suitability of soils for land uses. If the soil at the pit is MhB, Miamian silt loam it is good for all uses below except:

A. To grow hardwood trees

B. To grow hydrophytic plants

C. To support camping areas

D. To filter septic tank leachate

9. The MhB, Miamian silt loam is best suited to which recreational use below?

A. Camping areas

B. Streets and roads

C. Playgrounds

D. Golf fairways

10. The Ragsdale silt loam offers landusers advantages, and is rated good for what kind of wildlife or habitat below?

A. Open land wildlife

B. Wetland wildlife

C. Woodland wildlife

D. Coniferous plants

11. The moderately steep Miamian soil map unit at the wildlife station is rated good for many wildlife habitat types. Which habitat below is it not rated good for?

A. Coniferous plants

B. Hardwood trees

C. Grain and seed crops

D. Wild herbaceous plants

12. Ponds may be used as a water source for geothermal heat pump home energy systems. Which soil map unit at Camp Birch is rated best for soil features affecting pond reservoir areas?

A. CeB

B. MtC2

C. MiC3

D. RhB

13. Which soil map unit at Camp Birch is rated good for providing soil materials for embankments and pond construction?

A. CeB

B. MlC2

C. MtC2

D. MlC3

14. The General Soil Map shows two associations within the Little Miami Valley near Camp Birch. Which soil associations below are found at this camp?

A. 1 and 2

B. 1 and 3

C. 1 and 4

D. 2 and 3

15. Parent material is an important factor of soil formation which is significant to the formation of Miamian soil. What soil features found in the soil at the pit in the substratum is not typical for that layer?

A. Massive structure

B. Mild alkalinity

C. Clay texture

D. Firm consistence

16. The woodland management potential of Miamian soil is most limiting for which management concern below?

A. Seedling mortality.

B. Plant competition for conifers.

C. Windthrow hazard.

D. Erosion hazard.

17. Soil compaction reduces the amount of water that can be stored in the soil or for supplying aquifer recharge. Which factor below is not significant for causing compaction?

A. Repeated machinery traffic over farmland

B. No-till planting of crops at optimum moisture content

C. Heavy equipment traffic over soils

D. Equipment traffic on wet soils

18. Evaluating land uses which increase infiltration of water into the soil and aquifer recharge with water is done best by:

A. Studying soil descriptions

B. Analyzing plant populations

C. On-site soil investigations

D. Examination of soil maps

19. Agricultural producers may increase need for fossil fuel by which management practice below?

A. Limiting the number of field operations

B. Applying nitrogen on fields only when needed

C. Generating electric energy by windmills

D. Using conventional tillage

20. Riparian buffer strips around lakes are beneficial by protecting water quality. Wetland areas within a buffer system provide added benefit of filtering or retaining nutrients and sediment. Verification of riparian wetland or lake buffers is done best through:

A. Examination of soil maps

B. On-site investigations

C. Examination of aerial photos

D. Analyzing plant populations

21. The Soil Survey of Greene County says that the kinds of wildlife living in an area depends on all three factors below except:

A. Land use

B. Patterns of vegetation

C. Climate

D. Distribution of water

22. Productive soils are important for growing biomass energy crops. Which crop below is currently most widely used for biomass energy production?

A. Native prairie grass

B. Corn

C. Poplar trees

D. Willow trees

23. Which soil below is not suitable (by evidence of the US Department of Energy) for installing a geo-thermal heat pump (GHP)?

A. Soil with good heat transfer properties

B. Soil with extensive, shallow bedrock

C. Soil saturated by water at 4 to 6 feet deep

D. Loamy outwash 5 feet deep over saturated sandy substratum

24. Fish species found in a body of water can often be an indicator of the water quality of that body of water. If you were to take a fish sampling of an intermittent stream, what species would you look for to decide this is a good quality stream?

A. White Sucker

B. Rainbow Darter

C. Creek Chub

D. Carp

25. Which of the following will increase the dissolved oxygen (D.O.) of Martin Lake on a sunny day in May?

A. Sandbar willow

B. Zooplankton

C. Weeping willow

D. Phytoplankton

E. Damselfly nymph

2006 Test

1) Topsoil depth is a measure of soil quality. What is the depth of topsoil to the nearest five inches of the soil at the pit?

A. 5 inches

B. 10 inches

C. 15 inches

D. 20 inches

2) Parent material and topography are factors, which influence soil formation. Which landform does the soil at the pit occupy?

A. Floodplain

B. Terrace tread

C. Upland depression

D. Upland flat

3) The solum of a soil contains the “true soil” in which roots grow and the processes of soil development occur. What is the depth of the solum in the soil at the pit?

A. 30 inches

B. 36 inches

C. 41 inches

D. 51 inches

4) The landscape position and parent material of a soil suggest the type of soil layers likely to be found in the soil. This fact is useful for making land use decisions. The parent material of the soil at the pit above 30 inches is:

A. Alluvium

B. Loess

C. Glacial outwash

D. Glacial till

5) Soil texture affects water holding capacity, nutrient retention, permeability of water and other soil functions. These functions determine a soils suitability to land uses. What is the soil texture between 25 and 30 inches deep in the pit?

A. Silt loam

B. Loam

C. Clay loam

D. Clay

6) Soil drainage class refers to the depth of water saturation in a soil profile that existed under natural conditions. The soil at the pit is in which USDA soil drainage class?

A. Somewhat poorly drained

B. Moderately well drained

C. Well drained

D. Very poorly drained

7) The structure of a soil involves the shape, grade and size of soil aggregates found in the soil. It is an important indicator of soil quality. What is the structure of the soil at the pit between 25 and 30 inches deep?

A. Granular

B. Platy

C. Subangular blocky

D. Prismatic

8) The Soil Survey gives much information on the suitability of soils for land uses. One must identify the soil type to be able to use it. The soil at the pit is good for all uses below except:

A. To grow hardwood trees

B. To grow grasses

C. To support camping areas

D. To filter septic tank leachate

9) Given that the soil at the pit is WdA, Warsaw variant, it is best suited to which recreational use below?

A. Camping areas

B. Picnic areas

C. Playgrounds

D. Golf fairways

10) Which soil map unit at Tawawa Park is rated best for water management through pond reservoir areas?

A. CrA

B. MhF

C. St

D. WdA

11) Soils formed under wet conditions that have slow permeability and the capacity to store and sustain desired water levels provide the best opportunities for wetland restoration. What name has been given to these wetland soils?

A. Hydrophytic soils

B. Clay based soils

C. Hydric soils

D. Muck soils

12) Living organisms are an important factor of soil formation, which is significant to the formation of Warsaw Variant soil. What soil features found in the soil at the pit is stated to be plentiful in the surface layer of this soil signifying living organisms?

A. Stones

B. Worm casts

C. Mottling

D. Concretions

13) Which of the following statements best describes the wildlife habitat potential of Stonelick soil for woodland wildlife?

A. It is impractical to establish woodland wildlife habitat here.

B. Intensive management is required to maintain it.

C. Moderately intensive management is required to maintain it.

D. Few limitations exist here to managing woodland wildlife habitat.

14) Adding new organic matter to the soil every year is important to maintaining soil quality. Which outcome of those listed below is least beneficial to water storage and availability in the soil?

A. Improved soil structure

B. Enhanced nutrient holding capacity

C. Enhanced water holding capacity

D. Soil protected from compaction

15) Land uses that enhance infiltration of water into the soil protect streambanks and buffer areas. This promotes aquifer recharge with water and slows soil erosion. Evaluation of land uses for infiltration is done best by:

A. Studying soil descriptions

B. Analyzing plant populations

C. On-site soil investigations

D. Examination of soil maps

16) Farmers can manage their operations to sequester (store) more carbon, thereby slowing climate change by all measures below except:

A. Planting cover crops

B. Applying manure to cropland

C. Clearing woodlands

D. Restoring wetlands

17) Agricultural producers may increase emissions of greenhouse gases by which management practice below?

A. Limiting the number of field operations

B. Applying nitrogen on fields only when needed

C. Using conventional tillage

D. Using digesters and covers on animal waste lagoons

18) An estimated 21,000 square miles of alluvial soils in Mesopotamia lost its crop production potential in the last 6,000 years (with population decline in the same region of about 16 million people in the corresponding area today of Iraq). The people obviously failed to manage the land wisely. Which factor below did not contribute to this loss?

A. Loss of soil by erosion in the alluvial area

B. Accumulation of silt in the rivers

C. Invasions of nomads

D. The breakdown of the irrigation system

19) Each factor listed below affected the success of agriculture in the ancient Egyptian civilization along the Nile River except:

A. Flood irrigation

B. Soil erosion

C. Silt deposition on the soil surface

D. The origination of power farming

20) Soil compaction reduces the amount of water that can be stored in the soil or for supplying aquifer recharge. Which factor below is not significant for causing compaction?

A. Repeated traffic by machinery over farmland

B. No-till planting of crops at optimum moisture content

C. Heavy equipment traffic over soils

D. Equipment traffic on wet soils

21) Which soil at Tawawa Park is most likely to have hydric inclusions?

A. MhF

B. St

C. WdA

D. CrA.

22) Many soils in Shelby County are highly susceptible to soil erosion. Three factors below influence the ease of erosion on these soils. Which factor below will be most beneficial to slow erosion?

A. Surface layer of soil is high in silt

B. Surface layer of soil is low in organic matter

C. Subsoil layer is loamy

D. Subsoil layer is clayey

23) The loss of which soil below would be most damaging to the overall crop production base in Shelby County?

A. Pa

B. St

C. Pe

D. MhB

24) Average annual precipitation for Shelby County and Tawawa Creek is:

A. 28”

B. 36”

C. 44”

D. 50”

25) Which soil map unit at Tawawa Park is rated good for providing topsoil for construction?

A. CrA

B. MhF

C. Sh

D. St

2005 Test

1. The Ohio Historical Society states that historical landscape research should include all of the following except:

a. investigations of extant drawings

b. specifications

c. plant lists prepared by the original and subsequent designers, if such documents are available.

d. soil analysis

2. There are several minor shrinkage cracks and several movement cracks in the Bank Barn. What causes the shrinkage cracks and movement cracks?

a. The freeze-thaw cycle

b. The heat-humidity cycle

c. The moisture retention cycle

d. The eco-thermo cycle

3. Some of the richest farmland in Ohio is found in Preble county, and stretches northeastward into Miami and Shelby counties. Select the name given to this ground by geologists from the following list.

a. the macadamized ridge

b. the macadamized belt

c. the moranic system

d. the till plains

4. Historically Ohio farm landscapes were separated into fields by numerous brushy fencerows and hedges. This type of habitat is beneficial to certain upland wildlife. However, changes in farming practices have resulted in removal of most of these field dividers. This has contributed to the decline in the population of many upland wildlife species. Which of the following animals are considered to be upland game species that utilize brushy field dividers?

a. Cottontail rabbit, Bobwhite quail, Ring-necked pheasant

b. Chipmunk, Eastern bluebird, Box turtle

c. American coot, Hooded merganser, Mallard

d. Woodchuck, Woodcock, Wood duck

5. When a crop field is not fall plowed after harvest the crop residue reduces the amount of soil erosion caused by rain and wind. Which statement is also true about crop residue?

a. It provides excellent winter cover for wildlife

b. It provides food for wildlife in the form of waste grain

c. It causes excessive debris in Ohio’s streams

d. It increases wind erosion

6. There is a hand-dug well near the soils station. Please choose the best reason for its high potential for pollution.

a. It is located near a feedlot.

b. It is shallow.

c. It is old.

d. It is lined with stones instead of cement blocks.

7. What is another name for water table?

a. Impervious layer

b. Bed rock

c. Water fall

d. The top of the zone of saturation

8. Ohio’s regulations, administered by the county health departments, require that septic systems and wells be separated by at least 50 feet. Why was a distance established?

a. To prevent well-drilling equipment from crushing and ruining the leach field. b. To keep septic tank pump trucks from running over the wellhead.

c. To prevent contamination of the well by the partially-treated sewage in the leach field

d. In order to reduce the number of lightening strikes that travel between the two systems

9. A homeowner with a septic system should have the tank pumped to maintain it. How often should this happen?

a. Every three years or when the annual inspection demonstrates a need.

b. Only when the drains back up.

c. Every ten years.

d. Before alternating the leach fields every year.

10. The majority of southwest Ohio’s private and community drinking water is drawn from the buried valley aquifer. This aquifer is said to be relatively vulnerable to pollution from the surface. Therefore, which description best suits the aquifer?

a. A layer of sandstone bedrock surrounded by clay.

b. An ancient valley filled with sand and gravel during the glacial period.

c. A large channel dug by Native Americans and buried by the first European settlers

d. Deep clay and silt deposits.

11. Forestry Best Management Practices (BMPs) were established mainly to minimize:

a. the spread of invasive species

b. soil erosion

c. wind damage

d. forest fires

12. If an Ohio tree has a site index of 80 listed in the soil guide, you could expect a 50 year old tree to:

a. contain 80 boardfeet of lumber

b. be 80 feet tall

c. be 80 centimeters in diameter

d. be 80 inches in circumference

13. If a flat woodland soil has a shallow rooting zone and is saturated which of the following hazards is most likely?

a. windthrow

b. erosion

c. lightning damage

d. slippage

14. Soil compaction is most damaging to tree roots because it restricts the availability of?

a. water

b. nutrients

c. air

d. heat

15. If the dominant vegetation on a forest site was pitch pine, scarlet oak, and blueberries, what would that tell me about the soil and site?

a. there is little moisture and the soil is high pH

b. there is little moisture and the soil is low pH

c. there is plentiful moisture and the soil is high pH

d. there is plentiful moisture and the soil is low pH

16. Where in this area is soil compaction likely the greatest? a. along the grassed lane b. in the middle of the crop field c. on the forested hill side d. They are all equally compacted

17. Conservation of topsoil on cropland is beneficial to sustaining or enhancing crop production. This also improves soil quality. The quality of soil for crop production is reduced by (Assume soil fertility is maintained after each crop harvested.)

a. Increasing biological activity

b. Increasing the organic matter content

c. Maintaining a layer of plant residue atop the soil

d. Reducing the variety or biomass of crops grown.

18. Growing carbon in crop fields is an advantage for farmers and environmentalists alike. Accumulation of carbon in soil reduces carbon dioxide in the air. As farmers succeed in storing more carbon in soil which climate change would we expect to see?

a. Warmer average air temperatures

b. Less frequent droughts

c. Longer growing seasons

d. Changes in seasonal rain or snow fall

19. Agricultural producers may increase emissions of greenhouse gases by which management practice below?

a. Limiting the number of field operations

b. Applying nitrogen on fields only when needed

c. Using conventional tillage

d. Using digesters and covers on animal waste lagoons

20. Which one of the following statements best describes a soil map unit description in the soil survey?

a. Any soil profile in the map unit will look the same as the typical profile

b. The description gives the soils representative suitability to a land use

c. Any soil profile in the map unit is equally suited to a certain land use

d. The description explains all the management concerns of a home-site

21. Trails established on the Swartsel Farm Historical Center lack a handicap accessible surface. Which soil below poses the most difficult limitation to establishing a handicap accessible surface on the trails? (See suitability for streets)

a. FgB

b. OkC2

c. Rs

d. CeB

22. The shape of the clusters of soil particles determines the form of soil structure of a soil pedon. The structure of the soil in the pit at 23” to 27” is:

a. Granular

b. Platy

c. Subangular blocky

d. Massive

23. The landscape position and parent material description of a soil suggest the type of soil layers likely to be found deeper in the soil. Recognition of this is useful for land use decisions. The parent material of the soil at the pit is:

a. Alluvium over outwash

b. Loess over outwash

c. Outwash

d. Loess over glacial fill

24. The landscape position (or landform) of the soil at the pit is the result of the processes of wind, flowing water, continental glaciers, or glacial meltwater streams. The land form of the soil at the pit is called:

a. Flood plain

b. Ground moraine

c. River terrace

d. Outwash plain

25. The soil at the pit is a Mollisol. It has a thick, dark surface layer of topsoil which formed under native prairie with scattered trees. What is the depth of topsoil at the pit?

a. 10 inches

b. 8 inches

c. 14 inches

d. 18 inches

2004 Area IV Envirothon Test

1. The loss of topsoil from construction sites or home sites with heavy equipment or erosion is the worst on-site damage in urban areas. The ability of the soil to sustain urban landscape plantings is impaired by this loss due to all of the following affects except:

a. Diminished biological activity of the soil b. Reduction in the organic matter content of the soil. c. Reduction of nutrients available to the plants. d. Loss of the soil’s ability to support foundations. e. Loss of the soil’s ability to regulate water flow.

2. The soil is often an overlooked yet important component of our urban infrastructure. Which of the following would not promote soil conservation on construction sites?

a. Regulating runoff of storm water b. Supporting trees, shrubs, lawns and gardens c. Correcting soil related problems after they occur d. Limiting soil compaction during construction e. Implementing erosion control practices

3. Which one of the following statements is true of a Soil Series description in the Soil Survey?

a. Any soil profile of the series will look the same as the typical profile. b. The description is representative of the series in the county. c. Any soil profile of the series is equally suited for a certain land use. d. The description explains all the management concerns of a home site. e. The description give all the information needed to install a septic tank absorption field.

4. A soil’s quality for any land use is assessed by comparing it to a “reference soil condition”, and indicators of soil quality. Which soil property below is least useful an indicator of soil quality?

a. Soil organic matter (SOM) b. Infiltration c. Bulk density (BD) d. Soil color e. Soil respiration

5. One purpose of assessing soil quality of a parcel of land regarding farmland preservation is to protect and improve long-term agricultural productivity. Many soil properties affect the uses of soil including available water capacity, rooting depth (the deeper the better), typical yields, limitations for farming, etc. Soil limitations for uses in the Soil Survey indicate the affect of these and other soil properties on development. The conversion of which soil in the table below to non-farm uses would have the least impact on future crop productivity?

Answer number and soil type

Corn Yield

Rooting Depth

Farming Limitations

a. CeA

115

Moderately Deep

Slight

b. MhC2

85

Moderately Deep

Moderate

c. EmA

110

Moderately Deep

Slight

d. ElB2

90

Moderately Deep

Slight

e. Mt

110

Deep

Moderate

6. A soil’s quality depends partly on the shape of the clusters of soil particles or forms of soil structure. Which term below describes a cluster of soil particles formed in the soil by result of soil compaction by grading equipment?

a. Plates b. Granules c. Blocks d. Clods e. Plates

7. Processes occurring in the soil over time may be called development or weathering. These processes greatly improve the soil suitability for urban land use. All of the following processes have occurred in the solum of the ElB2 map unit except:

a. Accumulation of humus b. Accumulation of clay c. Formation of blocky structure d. Formation of platy structure e. Accumulation of sesquioxides

8. Soil drainage class refers to the frequency, depth, and duration of saturation by water in the soil profile that existed during soil formation. The soil at the pit is in which USDA soil drainage class?

a. Very poorly drained b. Somewhat poorly drained c. Moderately well drained d. Well drained e. Somewhat excessively drained

9. Soils at the stations of this contest are formed in one of three types of parent materials. What type of parent material is the soil at the pit formed in?

a. Glacial outwash b. Loess c. Recent alluvium d. Glacial till e. Lacustrine deposits

10. The landforms on which soils formed were shaped by powerful forces of nature such as continental glaciers, and the power of flowing water. What is the landform on which the soil at the pit formed in?

a. Upland depression b. Stream terrace c. Upland hillslope d. Floodplain e. Terrace (geological)

11. Soil suitability to urban land uses is related to depth to root restrictions or the depth to the bottom of the solum. What is the thickness in inches of the B horizon of the soil at the pit?

a. 11 b. 22 c. 28 d. 43 e. >60

12. The structure of the soil is related to the depth of soil development which is also related to permeability and water saturation. The structure is critical to the soils quality for building site development. What is the dominant structure of the subsoil at this site?

a. Granular b. Massive c. Prismatic d. Platy e. Subangular blocky

13. The texture of the soil is related to the soils moisture holding capacity. Many years this is critical for buildings with basements and septic tank absorption fields. What is the texture of the subsoil at the soil at this site between 11 and 32 inches in depth?

a. loam b. silt loam c. clay d. silty clay loam e. silty clay

14. The potential of the ElB2 soil map unit is fair for all of the following habitat elements except:

a. Grain crops b. Grasses and legumes c. Hardwood trees d. Woodland wildlife e. Coniferous trees

15. The soil at the pit is not typical for soils in this map unit and is deeper to sand and gravel. It is better than usual for many urban related land uses. The depth to single grained sand and gravel is:

a. 10-20 inches b. 20-40 inches c. 40-60 inches d. 60-80 inches e. >80 inches

16. Very poorly drained soils such as Montgomery, which is the second most extensive very poorly drained soil in Miami County exhibit many features favorable to establishing wetlands. All of the following features indicate this soil is well suited to establishment of wetlands except:

a. A good rating for wetland plants b. A good rating for shallow water areas c. A good rating for wetland wildlife d. Occasional flooding frequency e. A seasonal high water table between 0 and 1 feet in depth

17. The ability of a soil to support wetland functions depends greatly on the presence of wetland hydrology, and partially the duration of saturation by water in the upper part. Which soil type below has the worst wetland hydrology in the un-drained condition regarding the duration or depth of saturation by water?

a. Mt, Montgomery silty clay loam b. OdA, Odell silt loam c. Pe, Pewamo silty clay loam d. Ed, Edwards muck e. Wt, Westland silty clay loam

18. Tree species recommended for establishment on various soil map units are grouped by natural soil drainage. Which species below would not be recommended on ElB2 soil map unit?

a. Eastern White Pine b. Pin Oak c. Northern Red Oak d. Black Walnut e. Yellow Poplar

19. Which popular land use decision below is not facilitated or encouraged by the presence of woodland on a site?

a. Campgrounds b. Noise abatement buffers c. Hunting areas d. Hiking trails e. Athletic fields

20. True or False: The majority of a mature trees roots are generally located in the top 12” of the soil profile.

a. TRUE b. FALSE

21. BMP’s or Best management Practices are measures that when utilized during timber harvesting help to minimize soil erosion – which of the following legislative acts provides a basis for encouraging the use of BMP’s on logging jobs in Ohio:

a. House Bill 402 b. House Bill 88 c. The Ohio Forestry Initiative d. The 1999 Soil Protection Act

22. Which of the following is a term to designate the quality of a forest soil based on the height of the dominant trees at an arbitrarily chosen age – for example the average height of dominant trees at age 50 is 75 feet?

a. Soil productivity value b. Tree growth indicator c. Height variable d. Site index

23. Wind-throw is fairly common on what type of soil?

a. Moderately deep well-drained slopes

b. Shallow poorly drained soils with underlying fragipan

c. Shallow well-drained soils with underlying gravel d. All of the above

24. Taking into consideration the existing natural features of Johnston Farm, including the soils, wetlands, forests, streams and topography, many limitations for building development exist. If the entire site was proposed to be converted into residential housing, what limitation would be most difficult to overcome?

a. Floodplain b. High seasonal water table c. Hydric soils d. Slope

25. Montgomery silty clay loam exhibits poor potential for many wildlife habitat types, while Genesee silt loam, also on this site, is rated good. Which habitat type below is rated good for the Montgomery soil?

a. Grain cropsb. Grassesc. Wetland wildlifed. Wild herbaceous plantse. Hardwood trees