

Iowa FFA Soil Career Development Event 2005

1. In most cases the most fertile soil is found in the
 - a) A Horizon
 - b) B Horizon
 - c) C Horizon
 - d) R Horizon
2. Land with a slope of 5-14% and could have difficulties draining
 - a) Class I
 - b) Class II
 - c) Class III
 - d) Class IV
3. A vertical section exposing the various layers of a soil is called
 - a) Plant root zone
 - b) Soil horizon
 - c) Soil profile
 - d) Subsurface soil
4. Calcareous soils raise the soil pH above neutral and limit the availability of
 - a) Nitrogen
 - b) Calcium
 - c) Phosphorous
 - d) Potassium
5. A **clinometer** is a measuring device you use to measure the
 - a) Angle
 - b) Soil depth
 - c) Soil texture
 - d) Soil residue
6. Cattails would be found in which type of native vegetation
 - a) Forest
 - b) Prairie
 - c) Marsh
 - d) All the above
7. Tillage and crop rows oriented across slopes is called
 - a) Strip cropping
 - b) Contouring
 - c) Terracing
 - d) Permanent grass

8. Water-holding capacity of soil is affected by soil texture. As the particles decrease in size, the water-holding capacity
- Increases
 - Decreases
 - Not affected by
 - All the above
9. Most the time calcareous soil conditions cause
- Acidity of soil
 - Iron deficiency in soybeans
 - Increased availability of phosphorus for corn and alfalfa
 - Decreased availability of phosphorus for corn and alfalfa
10. Productivity indexes reflect the physical and chemical properties of the soil in terms of commonly grown crops. In Iowa, the index is called
- NRCS
 - RSC
 - IPI
 - CSR
11. The Natural resource Conservation Service (NRCS) is associated with and financed through
- National Land –Grant System (NLGS)
 - Department of Natural Resources (DNR)
 - Iowa State University (ISU)
 - United States Department of Agriculture (USDA)
12. Land with a limitation related to either water or wind erosion would have a subclass designation of
- c
 - w
 - e
 - s
13. Land that is not suitable for cropland but is not likely to be damaged by pasture or woodland use is considered
- Land Class III
 - Land Class V
 - Land Class VI
 - Land Class VII
14. What percent would a gentle slope have
- 0 to 2 percent
 - 2 to 5 percent

- c) 5 to 9 percent
 - d) 9 to 14 percent
15. A very slow rate of erosion under natural conditions is called
- a) Natural erosion
 - b) Rill erosion
 - c) Geographical erosion
 - d) Geological erosion
16. Which of the following is not a master soil horizon
- a) B horizon
 - b) C horizon
 - c) D horizon
 - d) E horizon
17. The best example of an intermittent drainageway is a
- a) Grass waterway
 - b) Filter strip
 - c) Cover crop
 - d) Buffer strip
18. Assume that you just completed the determination of percent slope to be 9 percent. Therefore, the slope group would be
- a) Nearly level
 - b) Gently sloping
 - c) Moderately sloping
 - d) Strongly sloping
19. The R Horizon is
- a) Hard bedrock
 - b) Loose bedrock
 - c) Rating soil
 - d) Loose underlying material
20. The A horizon is distinguished from the B horizon on the basis of
- a) Color
 - b) Structure
 - c) Texture
 - d) All the above
21. The color of this horizon shows a good indicator of the air and water relationships in the soil
- a) A horizon
 - b) B horizon
 - c) C horizon
 - d) E horizon

22. What is the percent of slope on land where the elevation falls 6 feet in 80 feet of horizontal distance.
- a) 5.5 %
 - b) 6.5 %
 - c) 7.5 %
 - d) 8.0 %
23. _____ refers to the current floodplain of the stream and contains strata and lenses of variable textures
- a) Bottomland
 - b) Footslope
 - c) Upland current
 - d) Intermittent terrace
24. For the majority of crops to grow satisfactory, there needs to be how many feet
- a) 2-3 feet of soil
 - b) 3-5 feet of soil
 - c) 5-7 feet of soil
 - d) 7-9 feet of soil
25. The number of land capability classes is
- a) 6
 - b) 7
 - c) 8
 - d) 9
26. CSR is used to identify the productivity potential of a soil. CSR stands for
- a) Crop Suitability Rating
 - b) Crop Stabilization Ranking
 - c) Corn Stationary Rate
 - d) Corn Suitability Rating
27. When estimating surface crop residue, the number of times you should observe each site is
- a) 2
 - b) 3
 - c) 4
 - d) 5
28. A benefit to a well-established grass waterway is
- a) Roots have time to use the water
 - b) Protects the soil from concentrated flow
 - c) Slows runoff and causes evaporation

- d) Allows organic matter to absorb the water
29. The stability of basement walls, foundations, patios, sidewalks, and concrete floors anchored to the ground is affected by soils whose volume changes by more than
- a) 9 %
 - b) 10 %
 - c) 11 %
 - d) 12 %
30. On land capability maps, Class IV land is colored
- a) Orange
 - b) Green
 - c) Blue
 - d) Brown
31. If a land capability map shows an area green, this land
- a) Has no special hazards or limitations
 - b) Can occasionally used for cropland
 - c) Has a slope gradient of 30 to 60 %
 - d) Land is not suitable for cropland but can be damaged by pasture or woodland
32. There are _____ land capability classes based on the degree of hazard or limitation for use of the land.
- a) 4
 - b) 6
 - c) 8
 - d) 10
33. A general rule of thumb is that if individual sand grains can be seen, the sample usually consists of a minimum of _____ percent sand.
- a) 2
 - b) 5
 - c) 9
 - d) 15
34. The field test method of determining soil texture is called
- a) Ribbon test
 - b) Soil testing
 - c) Hazard test
 - d) Kneading test
35. A conventional septic tank absorption field has the laterals placed at a depth of _____ below the ground surface.
- a) 12-24 inches

- b) 24-30 inches
 - c) 30-34 inches
 - d) 34-40 inches
36. The amount of water held and the rate water moves in the soil profile is called.
- a) Mottling
 - b) External drainage
 - c) Internal drainage
 - d) Mulching
37. In judging soil, the soil will be rated for its productivity potential in terms of how intensively the land can be
- a) Row cropped
 - b) Profiled
 - c) Tract
 - d) Strip-cropping
38. Spots of one or more contrasting colors on a background of another color is called
- a) Potholes
 - b) Ribbons
 - c) Knead
 - d) Mottles
39. As the size of the soil particles increase the water holding capacity
- a) Increases
 - b) Decreases
 - c) Stays the same
 - d) All the above
40. In evaluating building sites for houses with basements, the bedrock is a limitation when soft bedrock is found with
- a) One feet or less
 - b) Two feet or less
 - c) Three feet or less
 - d) Six feet or less

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Answers

1. A
2. B
3. C
4. C
5. A
6. C
7. B
8. A
9. C
10. D
11. C
12. C
13. B
14. B
15. D
16. C
17. A
18. D
19. A
20. D
21. B
22. C
23. A
24. B
25. C
26. D
27. B
28. B
29. A
30. C
31. D
32. C
33. D
34. A
35. B
36. C
37. A
38. D
39. B
40. C