

2006 Iowa FFA Soils Career Development Event Knowledge Test

1. The external soil characteristics that can be identified by observing the landscape is:
A. upland
B. surface features
C. landscape position
D. bottom land
2. Which of the following is NOT a landscape position?
A. upland
B. terrace
C. foot slope
D. horizon
3. Calculate the slope of a hill when in 80 feet of run the elevation drops 10 feet.
A. 6%
B. 12.5%
C. 9.5%
D. 8%
4. A slope of 8% would be called:
A. Nearly Level
B. Gently Sloping
C. Moderately Sloping
D. Strongly Sloping
5. Calculate the percent of slope when in 40 feet of run the elevation drops 6 feet.
A. 15%
B. 13%
C. 8%
D. 9.5%
6. A slope of 2.5% would be called:
A. Nearly Level
B. Gently Sloping
C. Moderately Sloping
D. Strongly Sloping
7. _____ can be subject to erosion, but cannot receive stream deposits because it is too high to be flooded.
A. slope
B. terrace
C. drainageway
D. upland
8. Horizons are influenced by:
A. weathering
B. plant and microbial activity
C. leaching
D. all the above
9. Parent material for organic soils is called:
A. peat
B. thickness
C. soil texture
D. terrace
10. Material formed in place by the weathering of bedrock into a disintegrated mass is called:
A. loess
B. slope
C. residuum
D. leaching
11. In terms of surface drainage if water has no avenue to escape, or is trapped in one spot it is:
A. ponded
B. rapid
C. medium
D. slow

12. Soil profiles are composed of various layers called:
- A. thickness
 - B. organic matter
 - C. soil pit
 - D. soil horizons
13. Forested soils and certain other intensely leached soils commonly contain a(n) ___ horizon located at the surface or a few inches below the surface.
- A. E
 - B. O
 - C. B
 - D. R
14. _____ is the loose underlying material.
- A. O horizon
 - B. R horizon
 - C. B horizon
 - D. C horizon
15. When giving the soil sample the “ribbon test,” if the soil readily forms flexible ribbons more than three inches long and retain its ribbon without separation it would be classified as:
- A. fine
 - B. coarse
 - C. medium
 - D. moderately coarse
16. _____ is described as a layer consisting of stones, cobbles, gravel, and very coarse sand that contains voids 1mm or larger in size.
- A. peat
 - B. vegetation
 - C. porous layer
 - D. parent material
17. When discussing parent material, a sample of soil that has sediments deposited by running water is called:
- A. residuum
 - B. loess
 - C. glacial drift
 - D. alluvium
18. Soils that develop under grass vegetation and usually have a thick, dark, A1 unless the soil is so steep that major erosion has occurred is classified as what type of native vegetation?
- A. transition
 - B. marsh
 - C. prairie
 - D. forest
19. If a soil is well aerated and has low water holding capacity it is considered what kind of internal drainage?
- A. well drained
 - B. excessively drained
 - C. somewhat poorly drained
 - D. poorly drained
20. Water evaporating from the wet soils leaves behind enough _____ to cause the calcareous condition.
- A. calcium carbonate
 - B. carbon dioxide
 - C. sodium nitrate
 - D. nitrogen oxide
21. Land capability is classified into how many different classes?
- A. 5
 - B. 6
 - C. 8
 - D. 10

22. When classifying land capability and productivity, an area that can be occasionally used for cropland under careful management but is better adapted for hay or pasture is considered Class ____.
- A. VIII
B. IV
C. I
D. VI
23. Which following statement(s) is true about Class I land?
- A. land is suitable for nearly any type of use.
B. soils are productive and easy to work.
C. land is not suitable for cropland.
D. both A & B are correct.
24. In terms of a soil's potential for intensive row cropping, a soil can be used for growing row crops at least half of the time but not continuously with use of adequate management it is considered to be which class:
- A. rough
B. medium
C. low
D. unsuited
25. Soils with what % slope can be used for continuous row crops?
- A. 9-18%
B. more than 18%
C. 0-4%
D. 4-9%
26. Practices that dispose of surface water to keep an area from being too wet for use is called _____
- A. subsurface drainage
B. grass waterways
C. surface drainage
D. contouring
27. _____ helps protect the soil from wind, water, and erosion.
- A. residue
B. terracing
C. strip cropping
D. tilling
28. A meter stick is one way to estimate surface residue. A second method is:
- A. surface ruler
B. linear estimates
C. 50-foot CAM-line
D. 25-foot rod
29. When measuring the residue on the surface with a meter stick you place the meter stick _____ the plant row.
- A. parallel to
B. next to
C. perpendicular to
D. against
30. _____ of the soil relates to the percent of volume change during wetting and drying.
- A. drainage
B. shrink-swell
C. texture
D. thickness
31. The practice of constructing ridges and channels across the slope to intercept run off water is called:
- A. terracing
B. strip cropping
C. contouring
D. grass waterways

32. Soils whose volume change by more than _____ will affect the stability of the soil.
- | | |
|-------|-------|
| A. 5% | C. 3% |
| B. 6% | D. 9% |
33. Land that occurs downslope from some adjacent land and receives sediment from these adjacent lands is called:
- | | |
|--------------------|--------------------|
| A. overwash | C. poorly drained |
| B. slightly eroded | D. severely eroded |
34. Calcareous soils occur in two kinds of situations in Iowa. One situation is caused by wetness and the other situation is:
- | | |
|---------------|-----------------------------|
| A. by residue | C. through rapid erosion |
| B. by drought | D. because of poor drainage |
35. What are the possible ranges for the Corn Suitability Ratings?
- | | |
|----------|----------|
| A. 60-5 | C. 90-10 |
| B. 100-5 | D. 75-4 |
36. Soft bedrock is NOT a limitation to building a house with a basement when the soft bedrock is _____ 3 feet from the foundation.
- | | |
|-----------------------------|----------------------|
| A. greater than or equal to | C. equal to |
| B. less than or equal to | D. None of the Above |
37. Why is internal drainage of soil an important influence when selecting a site for a house?
- the internal drainage affects the cost of building.
 - internal drainage affects the weight the soil can support.
 - internal drainage makes construction difficult.
 - none of the above.
38. A convectional septic tank absorption field has the laterals placed at a depth of _____ inches below the ground surface.
- | | |
|----------|----------|
| A. 24-30 | C. 40 |
| B. 36-40 | D. 18-25 |
39. _____ is used to cover either a disturbed or undisturbed area so that vegetation can be established and maintained on the site.
- | | |
|------------|----------|
| A. water | C. mulch |
| B. topsoil | D. grass |
40. The upper part of the soil usually contains the:
- | | |
|---------------------|-------------------------------------|
| A. most plant roots | C. accumulation of organic matter |
| B. lightest color | D. Both A& C are the correct answer |

2006 Iowa FFA Soils CDE Knowledge Test Answer Key

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