

## 2015 Iowa FFA Soils Evaluation CDE Exam

1. A vertical section exposing the various layers of soil is called a:
  - A. Soil profile
  - B. Soil horizon
  - C. Soil tier
  - D. None of the above
  
2. Which of the following is a TRUE statement relating to Class IV land?
  - A. It is colored purple on a land capability map
  - B. Slope may be between 5-14 percent
  - C. Is better adapted for hay or pasture most of the time
  - D. Both b and c are correct
  
3. Reeds, sedges, and cattails are an indication of which type of native vegetation?
  - A. Marsh
  - B. Forest
  - C. Prairie
  - D. Transition
  
4. Which of the following is a limitation when selecting a site for a house with a basement?
  - A. Shrink-swell of more than 9% volume change on wetting & drying
  - B. Evidence of the water table at greater than or equal to 5 feet
  - C. Hard bedrock found at a depth greater than or equal to 5 feet
  - D. Both a and c
  
5. For this contest, the erosion classification is determined by:
  - A. The thickness of the C horizon
  - B. The thickness of the B horizon
  - C. The thickness of the A horizon
  - D. The surface run-off
  
6. Subsoil color is usually most impacted by the:
  - A. Organic matter content in the topsoil
  - B. Air and water relationships in the soil
  - C. Color of the A and/or E horizons
  - D. Distance from a stream terrace or intermittent drainage way
  
7. Soil with a deep, somewhat poorly drained, medium textured soil with 1% slope is:
  - A. Class I land
  - B. Class IIw land
  - C. Class IIe land
  - D. None of the above

8. As the size of the soil particle decreases, the water holding capacity of the soil:
- A. Decreases
  - B. Increases
  - C. Remains the same
  - D. Particle size does not affect water holding capacity
9. A soil that is too wet in the spring:
- A. Helps to develop and maintain a deep root system
  - B. Often aggravates drought problems in the summer
  - C. Often helps the soil stay wet during a summer drought
  - D. Both a and c
10. How many land capability classes are NOT suitable for regular row cropping?
- A. 2
  - B. 3
  - C. 4
  - D. 5
11. The most effective, least expensive way to reduce soil erosion on level land is:
- A. Conservation tillage
  - B. Terracing
  - C. Contouring
  - D. Both a and b
12. An A horizon that is 5-6 inches thick, lighter, and acidic is most likely formed:
- A. Under forest vegetation
  - B. Under prairie vegetation
  - C. Under marsh vegetation
  - D. Under transition vegetation
13. E horizons are normally found in what type of soils?
- A. Intensely leached soils
  - B. Prairie soils
  - C. Forested soils
  - D. Both a and c
14. The landscape position is a former flood plain that no longer floods and is usually fertile:
- A. Upland
  - B. Intermittent drainage way
  - C. Foot slope
  - D. Terrace
15. When using the ribbon test, a “gritty” feel would mean the soil contains:
- A. Gravel
  - B. Clay
  - C. Silt
  - D. Sand

16. Which soil horizon is most like the parent material?
- A. A
  - B. B
  - C. C
  - D. None of the above
17. Soil that is suitable as a source for topsoil should have what type of texture?
- A. Fine
  - B. Medium
  - C. Coarse
  - D. Both a and b
18. Calcareous soil conditions can result in:
- A. High pH levels
  - B. Iron chlorosis in soybeans
  - C. Reduced effectiveness of some herbicides
  - D. All of the above
19. Indicators of past erosion could be:
- A. Gullies
  - B. Surface soil depth
  - C. Drainage class
  - D. Both a and b
20. Which of the following factors influence the formation of a soil?
- A. Climate
  - B. Parent material
  - C. Time
  - D. All of the above
21. The field test method of determining soil texture is called the:
- A. Ribbon test
  - B. Texturing test
  - C. Kneading test
  - D. None of the above
22. How deep should soil be for most crops to grow?
- A. 24 inches of soil
  - B. 36 inches of soil
  - C. 40 inches of soil
  - D. 3 to 5 feet of soil
23. Some young soils do not have a(n):
- A. A horizon
  - B. B horizon
  - C. C horizon
  - D. Both a and c

24. Which of the following land capability subclasses is not found in Iowa?
- A. e
  - B. w
  - C. s
  - D. c
25. With reference to surface features, landscape position describes:
- A. The location of trees and shrubs with regard to a septic tank absorption field
  - B. The location on a landscape and whether or not it is subject to flooding
  - C. Native parent material occurring on the landscape
  - D. None of the above
26. Why would a surface feature considered a stream terrace soil be droughty?
- A. Some terraces contain gravel layers at shallow depths
  - B. Terraces contain flood deposits when a stream was at that level
  - C. Terraces drain well because of their position in the landscape
  - D. Terraces are no longer subject to flooding
27. Soil horizons can be distinguished because they differ in such properties as:
- A. Hardness
  - B. Structure
  - C. Color
  - D. All of the above
28. Well aerated soils have uniform, brightly colored subsoils—commonly a shade of:
- A. Dark gray or olive gray
  - B. Grayish green or bluish gray
  - C. Yellowish brown or brown
  - D. Dusky red mottles
29. In deep soils, if a B horizon is present, how much of it is judged?
- A. All of it
  - B. The 10 inches immediately above the C horizon
  - C. The 10 inches immediately below the A or A+E horizons
  - D. None of the above
30. Organic matter:
- A. Decreases the absorption and retention of moisture and nutrients for plant growth
  - B. Enhances structural development and stability of soil aggregates
  - C. Reduces soil tilth
  - D. None of the above

31. The R horizon is:
- A. Subsoil
  - B. Organic matter
  - C. Bedrock
  - D. None of the above
32. In regard to soil parent material, alluvium is:
- A. Ground up material left by glaciers
  - B. Materials moved down steep slopes by gravity
  - C. Sediments deposited by running water
  - D. Organic materials that accumulated in bogs
33. Land capability classification criteria:
- A. Are used in preparation of conservation plans
  - B. Identify limitations and hazards of using land for agricultural purposes
  - C. Are important in determining whether an area of land is best suited for crops
  - D. All of the above
34. A very slow rate of erosion under natural conditions is called:
- A. Geological erosion
  - B. Natural erosion
  - C. Rill erosion
  - D. Geographical erosion
35. CSR:
- A. Stands for Corn Suitability Rating
  - B. Is used to identify the productivity potential of a soil
  - C. Is influenced by land leveling and other alterations
  - D. Both a and b are correct
36. A clinometer measures:
- A. Climate
  - B. Slope
  - C. Depth
  - D. None of the above
37. The greatest influencing factor on soil texture is:
- A. Parent material
  - B. Organic matter
  - C. Moisture
  - D. Lime

38. The amount of water held and the rate water moves in the soil profile is called:
- A. External drainage
  - B. Internal drainage
  - C. Erosion retention
  - D. Mottling
39. In regard to “texture,” silt particles are:
- A. 0.05 to 2.0 mm in diameter
  - B. 0.05 to 0.2 mm in diameter
  - C. 0.002 to 0.05 mm in diameter
  - D. Less than 0.002 mm in diameter
40. Land that is classified “medium” based on its potential for intensive row cropping can be row cropped:
- A. At no time
  - B. < 50% of the time
  - C.  $\geq 50\%$  of the time
  - D. Continuously

**Answer Key**

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