

<b>2002</b> <b>Iowa FFA Soil Career Development Event</b>
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Please mark the best answer on your score card.

- 1) A very slow rate of erosion under natural conditions is called:
  - a) Rill erosion
  - b) Natural erosion
  - c) Geographical erosion
  - d) Geological erosion
  
- 2) Calcareous soils have a high content of:
  - a) Magnesium
  - b) Mineral matter
  - c) Lime
  - d) Carbon
  
- 3) The field test method of determining soil texture is called
  - a) Ribbon test
  - b) Texturing test
  - c) Kneading test
  - d) Soil testing
  
- 4) In identifying and assigning soil horizons, capital letters are used to designate:
  - a) Subdivisions of horizons
  - b) Specific characteristics of the master horizon
  - c) Major changes soil nutrients
  - d) Master horizons
  
- 5) In evaluating building sites for houses with basements, bedrock is a limitation when soft bedrock is found within
  - a) Two feet or less
  - b) Three feet or less
  - c) Four feet or less
  - d) Five feet or less
  
- 6) Soil judging consists of
  - a) Evaluating certain properties of a soil and interpreting these evaluations into recommendations for land use
  - b) Evaluating differences in soils to determine limitations and best conservation practices
  - c) Estimating soil features, land capabilities and productivity to identify the limitations of a site
  - d) Classifying soils based on its properties and making recommendations for production and building sites

- 7) The soil particle that has a “floury” feel is
  - a) Sand
  - b) Silt
  - c) Clay
  - d) Very fine sand
  
- 8) For contest purposes, soil parent material is divided into
  - a) Four classes
  - b) Five classes
  - c) Six classes
  - d) Seven classes
  
- 9) Because of its texture, the following horizon has the strongest influence on soil productivity and management requirements:
  - a) A Horizon
  - b) Ap Horizon
  - c) O Horizon
  - d) B Horizon
  
- 10) For most crops to grow quite satisfactory, there needs to be
  - a) 36 inches of soil
  - b) 40 inches of soil
  - c) more than 40 inches of soil
  - d) 3 – 5 feet of soil
  
- 11) CSR is used to identify the productivity potential of a soil. CSR stands for
  - a) Crop Suitability Rating
  - b) Corn Suitability Rating
  - c) Crop Stabilization Ranking
  - d) Corn Stabilization Ranking
  
- 12) The two types of terrace systems are
  - a) Sediment and conservation
  - b) Storage and gradient
  - c) Narrow based and broadbased
  - d) Poned and free-flowing
  
- 13) Which tillage operation would leave the least amount of residue on the surface of the soil?
  - a) Paraplow
  - b) Moldboard plow
  - c) Field cultivator
  - d) Twisted shank chisel plow

- 14) One year of corn followed by one year of oats and one year of meadow reduces soil loss by
- a) 40%
  - b) 50%
  - c) 60%
  - d) 70%
- 15) Which is not an advantage of pasture planting
- a) Disrupts disease
  - b) Builds topsoil and organic matter
  - c) Better soil tilth
  - d) Uses less moisture
- 16) For conservation compliance, residues are measured
- a) Before planting
  - b) After planting
  - c) When the conservation plan is reviewed
  - d) After harvest
- 17) A meter stick is a means to estimate surface residue. A second method is
- a) Tape measure (50 feet)
  - b) Linear estimates
  - c) Line-transect
  - d) Surface ruler
- 18) Usually the most fertile soil is found in the
- a) A Horizon
  - b) B Horizon
  - c) C Horizon
  - d) R Horizon
- 19) Using tillage and crop rows oriented across slopes to reduce the velocity of run off and erosion is called
- a) Contouring
  - b) Terracing
  - c) Stripcropping
  - d) Conservation tillage
- 20) Some young soils do not have a(an)
- a) A Horizon
  - b) B Horizon
  - c) C Horizon
  - d) R Horizon

- 21) The percent slope can be measured directly with a hand level or
- Rangemeter
  - Compass
  - Topographicmeter
  - Clinometer
- 22) The best example of an intermittent drainageway is a
- Buffer strip
  - Cover crop
  - Filter strip
  - Grass waterway
- 23) On land capability maps from the SCS, Land Class VI is identified by the color
- Orange
  - Purple
  - Green
  - Brown
- 24) The greatest influence on soil texture is
- The amount of moisture
  - Parent material
  - Calcium carbonate
  - Organic matter
- 25) The thickness of material available for plant root development is considered the
- A Horizon
  - Deep
  - Soil Depth
  - Residuum
- 26) Which of the following is an advantage of a windbreak
- Shelter for wildlife
  - Changes wind direction
  - Lowers chance of disease in livestock
  - Limits the aesthetic value
- 27) In the *Conservation Catalog for the 1990's*, a C slope represents the following slope range
- 2-5%
  - 3-5%
  - 5-9%
  - 9-14%

- 28) Preparing the soil, planting, and cultivating crops around a hill nearly on the level, rather than up and down the hill is called
- Cross slope farming
  - Contour stripcropping
  - Crop rotation
  - Contour farming
- 29) Conservation compliance plans can be changed when the new plan
- Is approved by the SCS conservationist
  - Has practices of equal soil savings
  - Is prepared and submitted prior to January 1<sup>st</sup> for the upcoming crop year
  - Is comparable or better than the neighbors plan
- 30) In the *Conservation Catalog for the 1990's*, the number of conservation system options for conservation compliance recommended by the USDA SCS is
- 12
  - 15
  - 18
  - 24
- 31) 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
- 6%
  - 9%
  - 12%
  - 15%
- 32) For contest purposes, the number of land capabilities classes is
- 6
  - 7
  - 8
  - 10
- 33) External soil characteristics that can be identified by observing the landscape are referred to collectively as
- Topography
  - Profile traits
  - Surface features
  - Land classification
- 34) Land may be placed in Class IIw because
- Wide terraces are needed
  - Additional conservation practices are required
  - Row crops yields will be limited
  - Tile drainage is needed

- 35) A soil profile is
- a) The surface characteristics of a land judging site
  - b) Composed of layers called soil horizons
  - c) A major factor in determining best conservation practices
  - d) A characteristic that is used to identify landscape position
- 36) Water-holding capacity of a soil is affected by soil texture. As the size of the soil particles increases, the water holding capacity
- a) Remains the same
  - b) Is not affected
  - c) Increases
  - d) Decreases
- 37) The amount of water held and the rate water moves in the soil profile is called
- a) Internal drainage
  - b) External drainage
  - c) Muncell chroma
  - d) Mottling
- 38) Land with a limitation related to either water or wind erosion would have a subclass designation of
- a) e
  - b) w
  - c) s
  - d) c
- 39) The topsoil is likely to be the most permeable layer of soil in the profile. This means
- a) It is usually hard and dry
  - b) Will allow water and air movement
  - c) Is high in plant nutrient content
  - d) Has high water holding capacity
- 40) Land that is not suitable for cropland but is not likely to be damaged by pasture or woodland use is considered
- a) Land Class I
  - b) Land Class V
  - c) Land Class VI
  - d) Land Class VIII

**2002**  
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**KEY**

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