Soils Scantron 105481 (back side)

Pit 1

Pit 2

Pit 3

Available for Pit 4

OMN FFA Convention

Soils - Fall Invite - 3 pits

Questions in bold will have answers changed to match correct answers from pit 4 placard.
Minnesota Soils Scorecard Questions for Scantron # 105481

Use your scorecard to fill out the answers on the back side of your scantron
Bubble in the top portion of the sheet for Pits 1 (# 1-45) and 2 (#51-95)
Bubble in the bottom portion of the sheet for Pit 3 (# 1-45) (see diagram)

Pit 1 and Pit 2 Questions

Part 1: Surface soil
1. or 51. Surface Soil: Thickness in inches (2 pts)
   A. 7-9 inches
   B. 10-11 inches Answers to be determined
   C. 12-14 inches by pit and placard.
   D. 15-17 inches
   E. 18-20 inches

2. or 52. Surface Soil Color (4 pts)
   A. Dark
   B. Medium
   C. Light

3. or 53 Surface: Soil Texture (5 pts)
   A. Coarse
   B. Moderately Coarse
   C. Medium
   D. Fine
   E. Very Fine

4. or 54. Surface: Gravel and Rock (2 pts)
   A. None to Few
   B. Gravelly
   C. Very Gravelly
   D. Extremely Gravelly

Part 2: Subsurface Soil
5. or 55. Subsurface Soil: Thickness in inches (2 pts)
   A. 7-9 inches
   B. 10-11 inches Answers to be determined
   C. 12-14 inches by pit and placard.
   D. 15-17 inches
   E. 18-20 inches

6. or 56. Subsurface: Soil Color (4 pts)
   A. Bright
   B. Mottled
   C. Dull

7. or 57. Subsurface: Texture (5 pts)
   A. Coarse
   B. Moderately coarse
   C. Medium
   D. Fine
   E. Very Fine

8. or 58. Subsurface: Gravel and Rock (2 pts)
   A. None to Few
   B. Gravelly
   C. Very Gravelly
   D. Extremely Gravelly

Part 3: Underlying Material
9. or 59. Parent Material: Thickness in inches (2 pts)
   A. 7-9 inches
   B. 10-11 inches Answers to be determined
   C. 12-14 inches by pit and placard.
   D. 15-17 inches
   E. 18-20 inches

10. or 60. Underlying Material: Texture (5 pts)
    A. Coarse
    B. Moderately coarse
    C. Medium
    D. Fine
    E. Very Fine

11. or 61. Underlying Material: Gravel (2 pts)
    A. None to Few
    B. Gravelly
    C. Very Gravelly
    D. Extremely Gravelly

Part 4: Topography
12. or 62. Steepness of slope (3 pts)
    A. Nearly level – 2% or less
    B. Gently sloping - 3 – 6 %
    C. Moderately sloping - 7 – 12 %
    D. Strongly sloping - 13 - 18 %
    E. Steep – Greater than 18 %
13. or 63. Landscape position (3 pts)
A. Upland
B. Terrace – Footslope
C. Bottom land – Flood Plains
D. Depressional Area – No outlet

Part 5: Land Classification
14. or 64. Land Capability Classification (6 pts)
A. Class 1
B. Class 2 Answers to be determined
C. Class 3 by pit and placard.
D. Class 4
E. Class 5

Part 6: Interpretation of Soils Features
15. or 65. Type of Material that Limits Depth (2 pts)
A. None - No limiting materials
B. Bedrock – Soft or hard
C. Hardpan – Cemented
D. Very gravelly sand or high water table

16. or 66. Parent Material (2 pts)
A. Bedrock – Soft or hard
B. Alluvium/Outwash/ Lacustrine
C. Till/ Loess/ Aeolian Sand
D. Organic Materials – Peat or Muck

17. or 67. Depth favorable for roots & water (2 pts)
A. Very deep- 60 inches or more
B. Deep- 40 – 59 inches
C. Moderately Deep- 20 – 39 inches
D. Shallow- less than 20 inches

18. or 68. Air and water movement (2 pts)
A. Very Rapid
B. Rapid
C. Moderate
D. Slow

E. Total Available Water Capacity

Available water in horizon/ inch of soil
19. or 69. a. Surface Horizon (1 pt)
A. 0.05
B. 0.15
C. 0.20

20. or 70. b. Subsoil Horizon (1 pt)
A. 0.05
B. 0.15
C. 0.20

21. or 71. c. Underlying material Horizon (1 pt)
A. 0.05
B. 0.15
C. 0.20

Available Water Capacity per Horizon
22. or 72 a. Surface Horizon (1 pt)
A. 1.1 – 2.0
B. 2.1 – 3.0 Answers to be determined
C. 3.1 – 4.0 by pit and placard.
D. 4.1 – 5.0
E. 5.1-6.0

23. or 73. b. Subsoil Horizon (1 pt)
A. 1.1 – 2.0
B. 2.1 – 3.0 Answers to be determined
C. 3.1 – 4.0 by pit and placard.
D. 4.1 – 5.0
E. 5.1-6.0

24 or 74. c. Underlying material (1 pt)
A. 1.1 – 2.0
B. 2.1 – 3.0 Answers to be determined
C. 3.1 – 4.0 by pit and placard.
D. 4.1 – 5.0
E. 5.1-6.0

25. or 75. 3. Total available water capacity (5 ft. of soil)
A. Very low – less than 3 inches (4 pts.)
B. Low – 3.1 to 6 inches
C. Moderate – 6.1 to 9 inches
D. High – Over 9 inches

26. or 76. 4. Internal drainage (4 pts.)
A. Well drained
B. Moderately well drained
C. Somewhat poorly drained
D. Poorly or very poorly drained

Part 7 – Accelerated erosion
27 or 77. Amount of erosion (2 pt.)
A. No erosion evident (less than 2 inches)
B. Deposition (2 inches or greater)
C. Erosion present (2 inches or greater)
28. or 78. Kind of erosion (2 pts.)
A. None
B. Active gully
C. Wind erosion
D. Sheet or rill

Part 8 – Need for erosion control
29. or 79. Water erosion (3 pts.)
A. None to slight
B. Crop cover, sod cover and conservation tillage
C. Contour, strip crop and conservation tillage
D. Grass waterways and gully control
E. Woodland or permanent pasture, wildlife or recreation

30. or 80. Wind erosion (3 pts.)
A. None to slight
B. Mulch tillage, cover crop

Part 9
31. or 81. Drainage required (5 pts.)
A. None required
B. Surface and/or tile

Part 10 – Fertilizer and lime recommendations
32. or 82. Nitrogen pounds per acre (2 pts)
A. 200 lbs/acre
B. 170 lbs/acre Answers to be determined
C. 130 lbs/acre by pit and placard.
D. 70 lbs/acre

33. or 83. Phosphorous pounds per acre (2 pts.)
A. 50
B. 35 Answers to be determined
C. 20 by pit and placard.
D. 0

34. or 84. Potassium pounds per acre (2 pts.)
A. 95
B. 70 Answers to be determined
C. 40 by pit and placard.
D. 0

35. or 85. Lime tons per acre (2 pts.)
A. 6.0
B. 5.0 Answers to be determined
C. 4.0 by pit and placard.
D. 3.0

Part 11 – Land Use limitation
36. or 86. Dwellings (lawns), foundations, basements (3 pts.)
A. Slight
B. Moderate
C. Severe

Use limitation
37 or 87. Septic tank absorption fields (3 pts.)
A. Slight
B. Moderate
C. Severe

Use limitation
38. or 88. Farm lagoons and holding basins (3 pts.)
A. Slight
B. Moderate
C. Severe

39. or 89. % Slope (3 pts.)
A. Zero to 2.0
B. 2.1 to 6.0
B. 6.1 to 12.0
C. More than 12.0

40. or 90. Surface Soil Texture (1 pt.)
A. Medium, moderate, coarse
B. Coarse, fine, very fine

41. or 91. Flooding (3 pts.)
A. None
B. Any flooding

42. or 92. Internal Drainage Class (3 pts.)
A. Well drained, moderate well drained
B. Somewhat poorly drained
C. Poorly drained

43. or 93. Permeability Class (2 pts)
A. Vary rapid to rapid
B. Moderate
C. Slow to Very slow

44. or 94. Depth to Bedrock (Inches) (3 pts)
A. More than 60
B. 40 to 60
C. Less than 60

45. or 95. Underlying Material (Shrink swell) (1pt)
A. Coarse, mod. coarse, medium texture
B. Fine texture
C. Very fine texture