

I. SOIL PROPERTIES (5 points each, 45 total)

A. PARENT MATERIAL

- 1A Weathered bedrock
- 1B Till
- 1C Outwash/Lacustrine deposits
- 1D Eolian sand
- 1E Loess
- 2A Alluvium
- 2B Local overwash

B. SLOPE

- 3A 0-2%
- 3B 3-6%
- 3C 7-12%
- 3D 13-18%
- 3E 19-25%
- 4A 26-35%
- 4B >35%

C. LANDFORM

- 5A Upland hillslope
- 5B Upland swell
- 5C Upland flat
- 5D Upland depression
- 5E Outwash/Lacustrine hillslope
- 6A Outwash/Lacustrine swell
- 6B Outwash/Lacustrine flat
- 6C Outwash/Lacustrine depression
- 6D Dune
- 6E Flood plain
- 7A Filled depression

D. SURFACE SOIL COLOR GROUP

- 8A Gray
- 8B Brown
- 8C Black

E. PREVIOUS EROSION

- 9A None to slight
- 9B Moderate
- 9C Severe

F. SURFACE TEXTURE

- 10A Sandy
- 10B Moderately sandy
- 10C Medium
- 10D Moderately clayey
- 10E Clayey

G. SUBSOIL TEXTURE

- 11A Sandy
- 11B Moderately sandy
- 11C Medium
- 11D Moderately clayey
- 11E Clayey

H. NATURAL SOIL DRAINAGE

- 12A Poorly
- 12B Somewhat poorly
- 12C Moderately well
- 12D Well

I. LIMITING LAYER

- 13A Bedrock, 0-20 in
- 13B Bedrock, 21-40 in
- 13C Dense till, 0-20 in
- 13D Dense till, 21-40 in
- 13E Fragipan, 0-20 in
- 14A Fragipan, 21-40 in
- 14B Coarse sand & gravel, 0-20 in
- 14C Coarse sand & gravel, 21-40 in
- 14D None within 40 in

II. HOME SITE PRACTICES (3 pts. each, 72 total)

A. SITE SELECTION AND CONSTRUCTION PRACTICES

- | Yes | No | |
|------|----|--|
| 15 A | B | Is the soil suitable for a homesite? <i>If NO, mark practices 16-38 as NO, N/A, or No application</i> |
| 16 A | B | Preserve trees & plant new ones |
| 17 A | B | Maintain soil cover during construction |
| 18 A | B | Improve surface drainage |
| 19 A | B | Is the soil suitable for a basement? |
| 20 A | B | Design for high-clay subsoils |
| 21 A | B | Potential construction hazards on slopes |
| 22 A | B | Install diversion structures and drains |
| 23 A | B | Provide foundation drainage |
| 24 A | B | High risk for cave-in during construction |

B. LANDSCAPE AND LAWN PRACTICES

- 25 Manage soil reaction for acid-loving shrubs
A - No application; B - Apply sulfur; C - Plant other species
 - 26 Manage soil reaction for lawns
A - Apply lime; B - No application; C - Plant other species
- | Yes | No | |
|------|----|------------------------------|
| 27 A | B | Apply phosphorus (P) to lawn |
| 28 A | B | Apply potassium (K) to lawn |

C. ON-SITE SEWAGE DISPOSAL - SUITABILITY

- | Yes | No | |
|------|----|--|
| 29 A | B | Is soil suitable for an absorption field? <i>If NO, mark practices 30-38 as NO or N/A</i> |

D. SEPTIC TANK PRACTICES

- 30 Septic tank outlet filter cleaning interval
A - 6 months; B - 1 year; C - N/A
 - 31 Septic tank pumping interval (PI, years)
- | | | |
|-----|-----|--|
| 31A | 1-2 | $PI = \frac{(D \times G) / 1,000}{R}$ |
| 31B | 3 | |
| 31C | 4 | |
| 31D | ≥5 | $PI = \frac{(___ \times ___) / 1,000}{___}$ |
| 31E | N/A | |

D=Disp. (Y = 7; N = 10); G = tank size, gal.; R = Resid.

E. SOIL ABSORPTION FIELD PRACTICES

- | Yes | No | |
|------|----|---|
| 32 A | B | Subsurface trench, gravity flow system |
| 33 A | B | Subsurface trench, flood dose system |
| 34 A | B | Subsurface trench, pressure distrib. system |
| 35 A | B | Elevated sand mound system |
| 36 A | B | Elev. sand mound & subsurface drain |
| 37 A | B | Drip distribution & secondary treatment |
| 38 A | B | Secondary treatment |

Team / Contestant number: _____

Contestant name: _____

School /Club name: _____

Site number: _____

SCORE

Part I (45 points possible): _____

Part II (72 points possible): _____

Total (117 points possible): _____