

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

**A. PARENT MATERIAL**

- |                               |                  |
|-------------------------------|------------------|
| 1 Weathered bedrock           | 5 Loess          |
| 2 Till                        | 6 Alluvium       |
| 3 Outwash/Lacustrine deposits | 7 Local overwash |
| 4 Eolian sand                 |                  |

**B. SLOPE**

- |          |          |
|----------|----------|
| 1 0-2 %  | 5 19-25% |
| 2 3-6%   | 6 26-35% |
| 3 7-12%  | 7 >35%   |
| 4 13-18% |          |

**C. LANDFORM**

- |                                |                                 |
|--------------------------------|---------------------------------|
| 1 Upland hillslope             | 7 Outwash/Lacustrine flat       |
| 2 Upland swell                 | 8 Outwash/Lacustrine depression |
| 3 Upland flat                  | 9 Dune                          |
| 4 Upland depression            | 10 Flood plain                  |
| 5 Outwash/Lacustrine hillslope | 11 Filled depression            |
| 6 Outwash/Lacustrine swell     |                                 |

**D. SURFACE SOIL COLOR GROUP**

- 1 Gray
- 2 Brown
- 3 Black

**E. PREVIOUS EROSION**

- 1 None to slight
- 2 Moderate
- 3 Severe

**F. SURFACE TEXTURE**

- 1 Sandy
- 2 Moderately sandy
- 3 Medium
- 4 Moderately clayey
- 5 Clayey

**G. SUBSOIL TEXTURE**

- 1 Sandy
- 2 Moderately sandy
- 3 Medium
- 4 Moderately clayey
- 5 Clayey

**H. NATURAL SOIL DRAINAGE**

- 1 Poorly
- 2 Somewhat poorly
- 3 Moderately well
- 4 Well

**I. LIMITING LAYER**

- |                        |                                  |
|------------------------|----------------------------------|
| 1 Bedrock, 0-20 in     | 6 Fragipan, 21-40 in             |
| 2 Bedrock, 21-40 in    | 7 Coarse sand & gravel, 0-20 in  |
| 3 Dense till, 0-20 in  | 8 Coarse sand & gravel, 21-40 in |
| 4 Dense till, 21-40 in | 9 None within 40 in              |
| 5 Fragipan, 0-20 in    |                                  |

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

**A. SITE SELECTION AND CONSTRUCTION PRACTICES**

- |    | Yes | No |   |
|----|-----|----|---|
| 1  | A   | B  | Is the soil suitable for a homesite?<br><i>If NO, mark practices 2-24 as No, N/A, or No application</i> |
| 2  | A   | B  | Preserve trees & plant new ones   |
| 3  | A   | B  | Maintain soil cover during construction   |
| 4  | A   | B  | Improve surface drainage  |
| 5  | A   | B  | Is the soil suitable for a basement?  |
| 6  | A   | B  | Design for high-clay subsoils   |
| 7  | A   | B  | Potential construction hazards on slopes  |
| 8  | A   | B  | Install diversion structures and drains   |
| 9  | A   | B  | Provide foundation drainage   |
| 10 | A   | B  | High risk for cave-in during construction   |

**B. LANDSCAPE AND LAWN PRACTICES**

- 11 Manage soil reaction for acid-loving shrubs  
A - No application; B - Apply sulfur; C - Plant other species
- 12 Manage soil reaction for lawns  
A - Apply lime; B - No application; C - Plant other species

	Yes	No	
13	A	B	Apply phosphorus (P) to lawn
14	A	B	Apply potassium (K) to lawn

**C. ON-SITE SEWAGE DISPOSAL - SUITABILITY**

- |    | Yes | No |  |
|----|-----|----|--|
| 15 | A   | B  | Is soil suitable for an absorption field?<br><i>If No, mark practices 16-24 as No or N/A</i> |

**D. SEPTIC TANK PRACTICES**

- 16 Septic tank outlet filter cleaning interval  
A - 6 months; B - 1 year; C - N/A
- 17 Septic tank pumping interval (PI, years)

- |   |     |
|---|-----|
| A | 1-2 |
| B | 3   |
| C | 4   |
| D | ≥5  |
| E | N/A |

$$PI = \frac{(D \times G) / 1,000}{R}$$

$$PI = \frac{(\quad \times \quad) / 1,000}{\quad} \quad PI = \quad$$

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

**E. SOIL ABSORPTION FIELD PRACTICES**

- |    | Yes | No |   |
|----|-----|----|---|
| 18 | A   | B  | Subsurface trench, gravity flow system      |
| 19 | A   | B  | Subsurface trench, flood dose system        |
| 20 | A   | B  | Subsurface trench, pressure distrib. system |
| 21 | A   | B  | Elevated sand mound system                  |
| 22 | A   | B  | Elev. sand mound & subsurface drain         |
| 23 | A   | B  | Drip distribution & secondary treatment     |
| 24 | 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): \_\_\_\_\_