

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

### A. PARENT MATERIAL

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

### B. SLOPE

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

### C. LANDFORM

- 5A Upland hillslope
- 5B Upland swell
- 5C Upland flat
- 5D Upland depression
- 6A Dune
- 6B Flood plain
- 6C Filled depression

### D. SURFACE SOIL COLOR GROUP

- 7A Gray
- 7B Brown
- 7C Black

### E. PREVIOUS EROSION

- 8A None to slight
- 8B Moderate
- 8C Severe

### F. SURFACE TEXTURE

- 9A Sandy
- 9B Moderately sandy
- 9C Medium
- 9D Moderately clayey
- 9E Clayey

### G. SUBSOIL TEXTURE

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

### H. NATURAL SOIL DRAINAGE

- 11A Poorly
- 11B Somewhat poorly
- 11C Moderately well
- 11D Well

### I. LIMITING LAYER

- |                          |                                    |
|--------------------------|------------------------------------|
| 12A Bedrock, 0-20 in     | 13A Fragipan, 21-40 in             |
| 12B Bedrock, 21-40 in    | 13B Coarse sand & gravel, 0-20 in  |
| 12C Dense till, 0-20 in  | 13C Coarse sand & gravel, 21-40 in |
| 12D Dense till, 21-40 in | 13D None within 40 in              |
| 12E Fragipan, 0-20 in    |                                    |

## II. HOME SITE PRACTICES (3 pts. each, 69 total)

### A. SITE SELECTION AND CONSTRUCTION PRACTICES

#### Yes No

- 14 A B Is the soil available for a homesite?  
*If NO, mark practices 15-36 as NO, N/A, or No application.*
- 15 A B Preserve trees & plant new one
- 16 A B Maintain soil cover during construction
- 17 A B Improve surface drainage
- 18 A B Is the soil suitable for a basement?
- 19 A B Design for high-clay subsoils
- 20 A B Potential construction hazards on slopes
- 21 A B Install diversion structures and drains
- 22 A B Provide foundation drainage
- 23 A B High-risk for cave-in during construction

### B. LANDSCAPE AND LAWN PRACTICES

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

#### Yes No

- 26 A B Apply phosphorus (P) to lawn
- 27 A B Apply potassium (K) to lawn

### C. ON-SITE SEWAGE DISPOSAL – SUITABILITY

#### Yes No

- 28 A B Is soil suitable for an absorption field?  
*If NO, mark 29-36 as NO or N/A*

### D. SEPTIC TANK PRACTICES

- 29 Septic tank pumping interval (PI, years)

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

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

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

### E. SOIL ABSORPTION FIELD PRACTICES

- 30 A B Subsurface trench, small size
- 31 A B Subsurface trench, large size
- 32 A B Subsurface trench, very large size
- 33 A B Elevated sand mound system
- 34 A B Elev. sand mound & subsurface drain
- 35 A B Drip distribution & secondary treatment
- 36 A B Secondary treatment

Team / Contestant number: \_\_\_\_\_

Contestant name: \_\_\_\_\_

Site number: \_\_\_\_\_

### SCORE

Part I (45 points possible): \_\_\_\_\_

Part II (69 points possible): \_\_\_\_\_

Total (114 points possible): \_\_\_\_\_