

## 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             | 6A Outwash/Lacustrine swell      |
| 5B Upland swell                 | 6B Outwash/Lacustrine flat       |
| 5C Upland flat                  | 6C Outwash/Lacustrine depression |
| 5D Upland depression            | 6D Dune                          |
| 5E Outwash/Lacustrine hillslope | 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     | 14A Fragipan, 21-40 in             |
| 13B Bedrock, 21-40 in    | 14B Coarse sand & gravel, 0-20 in  |
| 13C Dense till, 0-20 in  | 14C Coarse sand & gravel, 21-40 in |
| 13D Dense till, 21-40 in | 14D None within 40 in              |
| 13E Fragipan, 0-20 in    |                                    |

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

### A. LAND USE OVERVIEW

- 15 Restore original vegetation to:  
A - Wetland; B - Prairie; C - Mesic forest
- Yes No
- 16 A B Prime farmland

### B. EROSION AND COMPACTION POTENTIALS

- 17 A B High for erosion by water
- 18 A B High for erosion by wind
- 19 A B High for soil compaction

### C. BUFFERS AND COVER CROPS

- 20 A B Grassed waterways
- 21 A B Windbreaks
- 22 A B Filter strips
- 23 Most significant benefit of cover crops:  
A - Scavenge N; B - No need; C - Erosion control

### D. CROPPING PRACTICES

- Yes No
- 24 A B Timber stand improvement (TSI)
- 25 A B Permanent pasture
- 26 A B Crop rotation

### E. TILLAGE PRACTICES

- 27 A B No till
- 28 A B Moldboard or chisel plowing

### F. WATER MANAGEMENT

- 29 A B Drainage
- 30 A B Irrigation
- 31 A B Terraces

### G. PLANT NUTRIENT APPLICATION

- |          | A   | B    | C       |
|----------|-----|------|---------|
| 32 N:    | Low | Med. | High    |
| 33 P:    | Add | None | Deplete |
| 34 K:    | Add | None | Deplete |
| 35 Lime: | Add | None |         |

### H. NUTRIENT POLLUTION POTENTIAL

- 36 Nitrogen pollution potential:  
A - High, ground water; B - High surface water; C - Med.
- 37 Phosphorus pollution potential:  
A - High; B - Medium; C - Low

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

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

School / Club name: \_\_\_\_\_

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

### SCORE

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

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

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