

2019 NACTA Soil Judging Contest Murray, KY



2 Year Division
Hosted by: Murray State University
April 12, 2019

Contestant Number	
Pit Number	
Number of Horizons	
Profile Depth	
Nail Depth	

A. Morphology

Part A Score _____

HORIZON- ATION	BOUNDARY		COLOR			MOIST CONSIST	TEXTURE		STRUCTURE		SOIL FEATURES	SCORE
	Master	Depth (cm)	Dist.	Hue	Value	Chroma		Rock Fragment Modifier	Class	Type		
	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(5)	(5)	(2)	(28)
1.												
2.												
3.												
4.												
5.												
6.												
A B C E R	Record lower depth in cm.	Abrupt (A) Clear (C) Gradual (G) Diffuse (D) None (-)					Loose (L) V. Friable (VFR) Friable (FR) Firm (FI) V. Firm (VFI) Ext. Firm (EFI)	None (-) Gravelly (GR) Very Grav. (VGR) Extrem. Grav. (EGR)	S, LS, SL, L, SCL, SC, C, SIC, SICL, CL, SIL, SI	GR PR SBK CO ABK MA PL SGR WEG	None (-) Concentrations (C) Depletions (D) White (W)	

Part II - SITE AND SOIL CHARACTERISTICS

1. LOCAL LAND FORM (5)
 - Floodplain
 - Stream terrace
 - Outwash plain
 - Kame/esker
 - Till plain/drumlin/moraine
 - Beach ridge
 - Alluvial fan
 - Loess plain/hillslope
 - Lake plain
 - Sand dune
 - Upland
 - Base slope
 - Depression

2. PARENT MATERIAL (5 pts each correct)
 - Alluvium
 - Glacial outwash
 - Glacial till
 - Beach deposit
 - Colluvium
 - Loess
 - Lacustrine
 - Eolian sand
 - Residium
 - Unconsolidated Coastal Plain Sediments

3. SLOPE (5)
 - Concave
 - 0 - < 2%
 - 2 - < 5%
 - 5 - < 10%
 - 10 - < 15%
 - 15 - 20%
 - > 20%

4. HILLSLOPE PROFILE POSITION (5)
 - Summit
 - Shoulder
 - Backslope
 - Footslope
 - Toeslope
 - None (slope < 2%)

5. SURFACE RUNOFF (5)
 - Negligible
 - Very Slow
 - Slow
 - Moderate
 - Rapid
 - Very Rapid

6. SOIL EROSION POTENTIAL (5)
 - Low
 - Medium
 - High

7. SOIL WETNESS CLASS (5)
 - Not wet above 150 cm (WD)
 - Wet between 50 to 150 cm (MWD)
 - Wet between 25 to < 50 cm (SWPD)
 - Wet above 25 cm (PD)

8. EFFECTIVE SOIL DEPTH (5)
 - Very Shallow (< 25 cm.)
 - Shallow (25 - < 50 cm.)
 - Moderately Deep (50 - < 100 cm.)
 - Deep (100 - 150 cm.)
 - Very Deep (> 150 cm.)

9. HYDRAULIC CONDUCTIVITY - SURFACE (5)
 - Slow
 - Moderate
 - Rapid

10. HYDRAULIC CONDUCTIVITY - LIMITING (5)
 - Slow
 - Moderate
 - Rapid

11. WATER RETENTION DIFFERENCE (5)
 - Very Low (< 7.5 cm.)
 - Low (7.5 - < 15 cm.)
 - Moderate (15 - 22.5 cm.)
 - High (> 22.5 cm.)

Part III – INTERPRETATIONS

1. ROADFILL (5)
 - Good
 - Fair
 - Poor
 - _____ Feature (5)

2. SEPTIC TANK ABSORPTION FIELDS (5)
 - Slight
 - Moderate
 - Severe
 - _____ Feature (5)

3. SEWAGE LAGOONS (5)
 - Slight
 - Moderate
 - Severe
 - _____ Feature (5)

Tie Breaker (Surface)

% clay _____ % sand _____

SCORE PARTS II & III _____