2023 Regional Soil Judging Contest – Sturgis, SD
Hosted by: South Dakota State University and USDA-NRCS (SD)
October 1-6, 2023

Contestant Number	
Pit Number	
Number of Horizons	
Profile Depth (cm)	
Nail Depth (cm)	

A. Morphology

Part A Score _____

HORIZONATION				BOUNDARY		COLOR			TEXTURE				STRUCTURE		MOIST CONS	SOIL FEATURES			EFFERV	SCORE
Prefix	Master	Sub.	No	Depth (cm)	Dist.	Hue	Value	Chroma	Rock Frag Mod	Class	% Sand	% Clay	Grade	Type	Moist Rupt. Res.	RMF – Conc. (Y/N)	RMF – Depl. (Y/N)	Matrix Conc. Type	Y/N	
(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(40)

B. Soil Hydrology and Profile Characteristics

Part B Score _____

Hydraulic Conductivity		Effective Soil Depth (5)	Water Retention Diff. (5)	Soil Wetness Class (5)	TOTAL SCORE
Surface (3-5-3)	Limiting. Layer (3-5-3)				
_____ Very High	_____ Very High	_____ Very Deep >150 cm	_____ Very Low < 7.5 cm	_____ Class 1: >150 cm	**Part A** _____
_____ High	_____ High	_____ Deep 100.1 - 150 cm	_____ Low 7.5 - < 15.0 cm	_____ Class 2: 100.1 - 150 cm	**Part B** _____
_____ Mod. High	_____ Mod. High	_____ Mod. Deep 50.1 - 100 cm	_____ Medium 15.0 - < 22.5 cm	_____ Class 3: 50.1 - 100 cm	**Part C** _____
_____ Mod. Low	_____ Mod. Low	_____ Shallow 25.1 - 50 cm	_____ High ≥ 22.5 cm	_____ Class 4: 25.1 - 50 cm	**Part D** _____
_____ Low	_____ Low	_____ Very Shallow < 25 cm		_____ Class 5: < 25 cm	**Part E** _____
_____ Very Low	_____ Very Low				**Total** _____

C. Site Characteristics

Part C Score _____

Landform (5)	Parent Material (5*)	Slope (5)	Hillslope Profile Position (5)	Surface Runoff (5)
_____ Fan	_____ Alluvium	_____ 0 to 2%	_____ Summit	_____ Ponded/Negligible
_____ Hill	_____ Colluvium/Local Alluvium	_____ 2 to 6%	_____ Shoulder	_____ Very Low
_____ Hogback	_____ Loess	_____ 6 to 9%	_____ Backslope	_____ Low
_____ Mountain Slope	_____ Glacial Till	_____ 9 to 15%	_____ Footslope	_____ Medium
_____ Mountain Terrace	_____ Residuum - igneous	_____ 15 to 25%	_____ Toeslope	_____ High
_____ Ridge	_____ Residuum - metamorphic	_____ >25%	_____ None	_____ Very High
_____ Terrace	_____ Residuum - sedimentary			

D. Soil Classification

Part D Score _____

Epipedon (5)	Diagnostic Subsurface Horizons & Features (5*)	Order (5)	Suborder (5)	Great Group (5)	Family Particle-Size Class (5)	
____ Mollic ____ Ochric ____ Umbric	_____Albic _____Argillic _____Calcic _____Cambic _____Glossic _____Gypsic _____Lithic Contact _____ Lithologic Discontinuity _____ Natric _____ Paralithic Contact _____ Slickensides _____ None	____ Alfisol ____ Entisol ____ Inceptisol ____ Mollisol ____ Vertisol	_____ Alb- _____ Aqu- _____ Fluv- _____ Orth- _____ Psamm- _____ Ud- _____ Ust-	_____ Argi- _____ Calci- _____ Gloss- _____ Hapl/Hap- _____ Fluv- _____ Natr- _____ Psamm- _____ Ud- _____ Ust-	_____ Sandy _____ Loamy _____ Clayey _____ Sandy-skeletal _____ Loamy-skeletal _____Clayey-skeletal _____Coarse-loamy over sandy or sandy-skeletal _____Coarse-silty over clayey _____Coarse-silty over sandy or sandy-skeletal _____Fine-silty over sandy or sandy-skeletal _____Fine-loamy over sandy or sandy-skeletal _____Fine-loamy over clayey	_____ Coarse-loamy _____ Fine-loamy _____ Coarse-silty _____ Fine-silty _____ Fine _____Very Fine

Depth of Particle Size Control Section (5)	
_____ 0 cm to root limiting layer	_____ Upper 50 cm of argillic
_____ 25 to 100 cm	_____ Upper boundary of argillic to 100 cm
_____ 25 cm to root limiting layer	_____ All of the argillic

E. Site Interpretations

Part E Score _____

Septic Tank Absorption Fields (5)	Local Roads and Streets (5)	Dwellings without Basements (5)	Lawns, Landscaping, and Golf Fairways (5)
_____ Slight	_____ Slight	_____ Slight	_____ Slight
_____ Moderate	_____ Moderate	_____ Moderate	_____ Moderate
_____ Severe	_____ Severe	_____ Severe	_____ Severe
Reason Number: _____	Reason Number: _____	Reason Number: _____	Reason Number: _____

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* The number of points can vary for this section: 5 points for each correct answer and -5 points for each incorrect answer with a minimum of 0 points for this section.