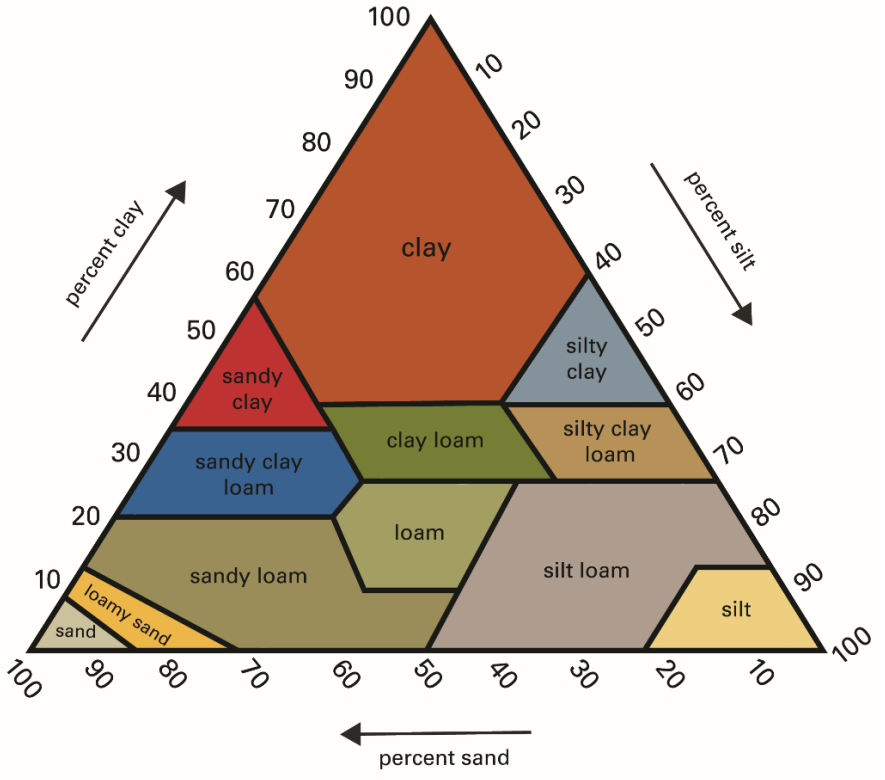
2023 REGIONAL IOWA ENVIROTHON
Soils Test
(25 total points)

MULTIPLE CHOICE: Select the best possible answer from those provided.

1. Iowa's soils
A. store carbon, filter water of impurities, provide habitat for many organisms
B. store and provide water and nutrients to plants
C. support food production and supports building structures and road
D. all of thes

2. What is the texture classification for a soil that is 40% sand, 40% silt, and 20% clay? (see texture chart)
A. Clay loam
B. Clay
C. Silt loam
D. Loam



MATCHING: Match the definition with the appropriate scientific term .

Soil Horizon Definitions (Matching)

A. A horizon	D. O horizon
B. B horizon	E. E horizon
C. C horizon	F. R horizon

_____ 3. Bedrock layer, rarely exposed in Iowa
_____ 4. Intensely weathered zone without significant organic or clay material
_____ 5. Layer relatively unchanged from deposition, also called parent material
_____ 6. Mineral enriched with organic material, zone of highest expected biological activity
_____ 7. Primarily organic material, commonly accumulating on forest floors or wetlands
_____ 8. Zone transformed by additions like clay, calcium, or minerals from other horizons

MULTIPLE CHOICE: Select the best possible answer from those provided.

9. Soil formation is the product of five conditions or factors that include parent material, climate, biota, relief, and time. What does biota mean?
A. only plants
B. only animals
C. plants and animals
D. karst

10. What parent material is primarily wind-blown silt materials found statewide, but especially pronounced in western Iowa?
A. Loess
B. Till
C. Alluvium
D. Lacustrine

11. The 12,000-square-mile landform region called the Des Moines lobe located in North Central Iowa is the results of 800 billion tons of pulverized, weatherable mineral-rich parent material left by
A. decomposing plants and animals
B. flooding streams and rivers
C. glaciers
D. volcanos

12. _____ also referred to as soil quality, is defined as the continued capacity of soil to function as a vital living ecosystem that sustains plants, animals, and humans.
A. Soil health
B. Soil texture
C. Soil landform
D. Soil structure

13. Which of the following is NOT a practice intended to reduce erosion and maintain or increase soil organic matter?
A. reduced-tillage or no-tillage systems
B. using terraces or prairie strips
C. using repeated fall tillage so that the soil surface is bare for the winter
D. incorporating cover crops between traditional annual crop rotations

14. On the soil survey block drawing (Figure 28), of the Lamoni-Shelby association which soil types are found in upland areas? (see Figure 28)
A. Colo
B. Shelby
C. Lamoni, Grundy, and Sharpsburg
D. All of the above

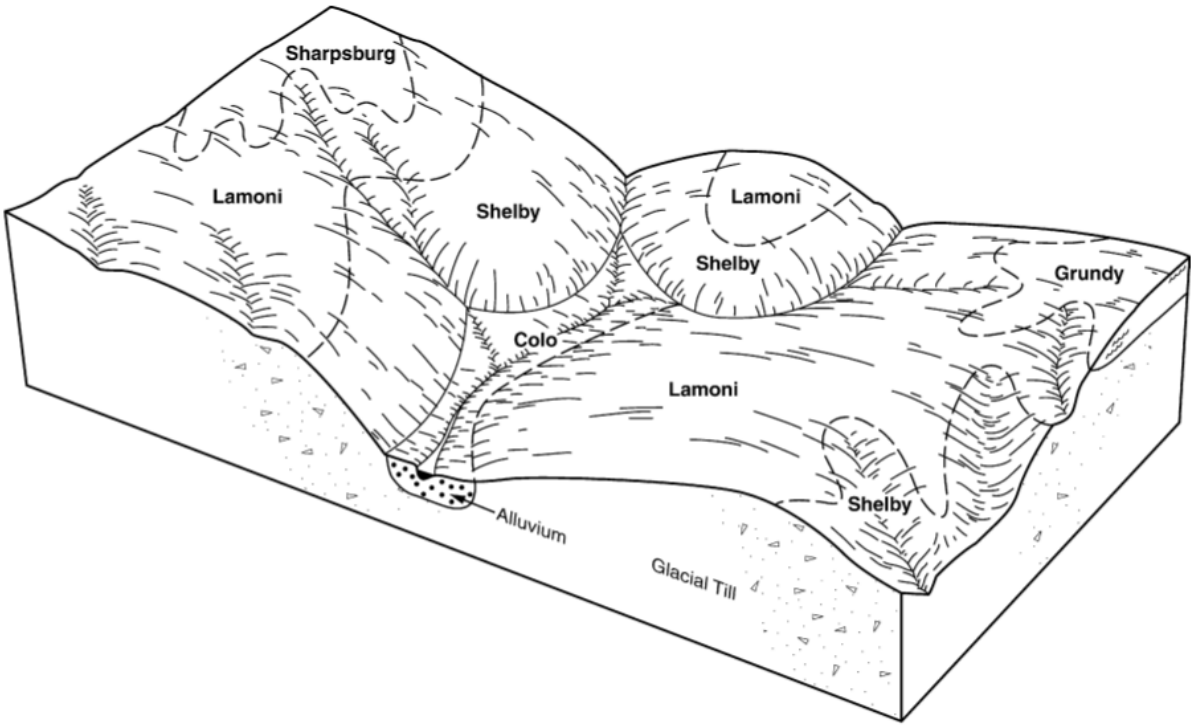


Figure 28.—Relationship of soils, topography, and parent material in the Lamoni-Shelby association in Gentry County, Missouri.

15. In areas where bedrock is exposed at the surface, it is referred to as _____.
A. a "B" horizon
B. an organic outcrop
C. a rock outcrop
D. all of these

16. Slope is the of an area with a rise of 2 feet in a horizontal distance of 40 feet?
A. .4%
B. .5%
C. 4%
D. 5%

17. Soil Texture refers to the
A. content of organic matter
B. relative proportions of sand, silt, and clay
C. cation-exchange capacity of the soil
D. "T" factor

18. What scale is used for Land Capability classes to represent progressively greater limitations and narrower choices for practical land use?
A. A, B, C, D, E, F, G, H
B. I, II, III, IV, V, VI, VII, VIII
C. high, moderately high, medium, moderately low, low
D. 100, 90, 80, 70, 60, 50, 40, 30, 20, 10

19. _____ soils are characterized by low strength and a greater susceptibility to wind erosion and less water available to plants than soils of other textures.
A. Clayey
B. Loamy
C. Sandy
D. Silty

20. The organisms occurring in the soil surface layer are important for
A. decomposition of soil organic matter
B. nutrient cycling and soil pollutant degradation
C. formation and stability of soil structure
D. all of these are correct

21. _____ refers to the degree of soil acidity or alkalinity.
A. Cation exchange capacity
B. Soil pH
C. Salinity
D. Structure

22. Staff at a local NRCS office can help landowners learn more about improving soil health and assist in developing a soil conservation plan. What does "NRCS" stand for?
A. Natural Resources Conservation Service
B. Natural Resources Conservation System
C. Nutrient Reduction Conservation Strategy
D. Needed Resources for Conserving Soils

23. Which of these is a type of water erosion?
A. gully
B. rill
C. sheet
D. all of these

24. After opening the Web Soil Survey (WSS) site and clicking the green "Start WSS" button, what is the first step suggested for using this site?
A. add your desired soil map to the Free Shopping Cart (FSC)
B. define Your Area of Interest (AOI)
C. download Soils Data for use in GIS (SD/GIS)
D. select the Soil Reports Tab (SRT)

25. Which statement is **true** regarding the Daily Erosion Project (DEP) precipitation map for February 14, 2023? (see DEP map)
A. The was no precipitation in Iowa on Feb 14, 2023.
B. The area of Iowa with the highest amount of precipitation on Feb 14, 2023 was southeast Iowa.
C. Parts of central and southwest Iowa had .5"-1.37" of precipitation on Feb 14, 2023
D. Parts of central and southwest Iowa had 3"-5" of precipitation on Feb 14, 2023

