

Soil Survey and Classification

1. What is the primary purpose of a soil survey and classification?

- a. Crop cultivation
- b. Describing weather patterns
- c. Identifying geological formations
- d. Describing and classifying soils in a given area

Answer: d

2. Which of the following is NOT a key application of soil survey and classification?

- a. Land use planning
- b. Environmental conservation
- c. Financial management
- d. Natural resource management

Answer: c

3. Why is the study of soil survey and classification important?

- a. For predicting the stock market
- b. Agriculture optimization and infrastructure planning
- c. Studying outer space
- d. Exploring marine ecosystems

Answer: b

4. Which one of the following is an international classification system for soils?

- a. National Soil Index
- b. Global Terrain Classification
- c. World Reference Base for Soil Resources (WRB)
- d. International Soil Taxonomy

Answer: c

5. Who is commonly regarded as the father of soil science and what significant contribution did he make in 1883?

- a. Charles Darwin - Theory of Evolution
- b. V.V. Dokuchaev - Soil survey and classification in Russia
- c. Gregor Mendel - Laws of Inheritance
- d. Marie Curie - Radioactivity

Answer: b

6. Why do various systems for soil survey and classification exist?

- a. Due to static nature of soils
- b. Uniformity in laboratory procedures
- c. Dynamic nature of soils and variations in survey purposes
- d. Lack of interest in soil science

Answer: c

7. Which documents guide soil survey practices in the United States?

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- a. Global Soil Standards
- b. National Soil Survey Handbook
- c. Earth Sciences Constitution
- d. World Soil Convention

Answer: b

8. How has soil survey evolved from the 19th century to modern times?

- a. Became more general and less detailed
- b. Included fewer electronic databases
- c. Became more detailed, included electronic databases, and published on smaller scales
- d. Only focused on geology

Answer: c

9. What is the purpose of Soil Survey Reports?

- a. To advertise soil products
- b. To classify soils for tax purposes
- c. To evaluate soil suitability for various uses and provide interpretations
- d. To list soil surveyors' names

Answer: c

10. What is one important fact about soil survey?

- a. It focuses on predicting the stock market
- b. It only involves fieldwork and not reports
- c. It includes understanding the purpose, tasks, and content of soil survey reports
- d. It is unrelated to agriculture

Answer: c

11. What is the first step in surveying an area?

- a. Numerous conferences and meetings
- b. Aerial photographs
- c. Satellite Imagery
- d. Reviews earlier soil surveys
- e. Reviews all maps related to that area

Answer: a

12. What qualities should surveyors possess?

- a. Good at public relations
- b. Self-starters
- c. Skilled in observation
- d. Adaptive
- e. Competent

Answer: b, d, e

13. What challenges might surveyors encounter while working?

- a. Bad weather

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- b. Locked gates
- c. Unfriendly landowners
- d. Dogs and wild animals
- e. Interpret soil profiles
- f. Look for boundaries where different soils meet each other

Answer: a, b, c, d, f

14. What equipment should surveyors have when working alone or in teams?

- a. Aerial photographs of the area
- b. Legend describing the most extensive soil areas
- c. Global positioning system (GPS)
- d. Digging tools (Shovel, Backhoes)
- e. Hand level
- f. pH-tester
- g. Munsell color book
- h. 1N HCl for lime test
- i. Probe truck or Hand augers

Answer: c, d, e, f, g, h, i

15. What is a Soil Mapping Unit (SMU) according to the survey process?

- a. A specific soil classification
- b. An area of soil delineated from adjacent areas on a map
- c. A type of soil erosion
- d. A soil profile

Answer: b

16. What does a Soil Survey Report primarily contain?

- a. Only soil maps
- b. Interpretations and other information
- c. Conclusions and recommendations
- d. Descriptions of aerial photographs
- e. A legend describing the area

Answer: b

17. What has increased the kinds and amount of data recorded in Soil Survey Reports?

- a. Urban development
- b. Environmental control
- c. Increased demand for information
- d. All of the above

Answer: d

18. What are the two main parts of a Soil Survey Report?

- a. Soil map and Soil profile
- b. Text and Aerial photographs
- c. Classification and Interpretation
- d. Description and Delineations
- e. Maps and Conclusions

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Answer: d

19. What are the two kinds of soil maps found in modern Soil Survey Reports?

- a. General soil map and Specific soil map
- b. Aerial soil map and Satellite soil map
- c. General soil map and Detailed soil map
- d. Urban soil map and Rural soil map

Answer: c

20. What kind of data is contained in extensive tables (database) in Soil Survey Reports?

- a. Temperature and precipitation
- b. Soil and water features
- c. Clay mineralogy of selected soils
- d. All of the above

Answer: d

21. What characterizes a Map Unit in soil surveying?

- a. A single soil area
- b. A collection of soil areas defined and named
- c. Any delineated area on a map
- d. A unit without a unique identifier

Answer: b

22. In soil survey mapping, what is the primary characteristic of a Consociation map unit?

- a. Dominated by one component
- b. Composed of various components
- c. Undefined and unnamed areas
- d. Difficult to distinguish from other units

Answer: a

23. How are Complexes and Associations distinguished in soil survey mapping?

- a. Complexes involve two or more dissimilar components
- b. Associations involve components that cannot be separated
- c. Both involve components that can be mapped separately
- d. Complexes have major components that are always mapped separately

Answer: a

24. What is the purpose of "Pre-mapping" in soil surveying?

- a. Finalizing map unit designs
- b. Developing temporary map units based on available map layers
- c. Eliminating the need for digital maps
- d. Ignoring existing analog maps

Answer: b

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25. How is the landscape partitioned in the Pre-mapping process?

- a. Based on climate only
- b. By vegetation patterns only
- c. By landform, geology, slope/aspect, and other features
- d. Randomly without consideration for features

Answer: c

26. What are the key steps in designing a map unit?

- a. Define the map unit components, name the map unit
- b. Delineate the areas, know the parameters
- c. Name the map unit, delineate the areas
- d. Know the parameters, define the map unit components

Answer: d

27. What parameters are considered when designing a map unit?

- a. Soil color only
- b. Order or type of survey, scale of mapping, base map, and documentation requirements
- c. Climate patterns only
- d. Delineation width

Answer: b

28. What are the different Orders or Types of Soil Survey, and what do they entail?

- a. Detailed, Semi-detailed, Unordered, Exploratory
- b. Order 1 – least intensive, Order 5 – most intensive
- c. Order 1 – most intensive, Order 5 – very extensive
- d. Order 1 – for general land management, Order 2 – for individual building plots

Answer: c

29. How is the area delineated in the process of designing a map unit?

- a. Only by climate
- b. Only by landform
- c. By partitioning the landscape based on various factors
- d. Without any specific criteria

Answer: c

30. What are the additional components of a Map Unit, and what is a Miscellaneous Area?

- a. Only Family and Series
- b. Family, Series, and Association
- c. Series and Undifferentiated Group
- d. Family, Series, and Miscellaneous Area, which may have little or no identifiable soil

Answer: d

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31. How many kinds of soil individuals are estimated in the United States alone, and why is it challenging to remember them all?

- a. Over 10,000
- b. Over 15,000
- c. Over 20,000
- d. Over 25,000

Answer: c

32. What is the primary purpose of organizing soil information by classification systems?

- a. To make it more complicated
- b. To ease the memorization of soil names and properties
- c. To confuse soil scientists
- d. To limit the information available

Answer: b

33. What is one of the most generally useful soil classification systems, particularly in the United States and elsewhere?

- a. Economic classification
- b. Physical classification
- c. Soil Taxonomy
- d. Geological classification

Answer: c

34. In early systems of soil classification, what were the main categories?

- a. Economic, Physical, Geological
- b. Chemical, Physiographic, Others
- c. Physical, Chemical, Geological
- d. Economic, Physiographic, Others

Answer: b

35. Who is often regarded as the founder of soil science and introduced the concept of soil as a natural body?

- a. Charles E. Kellogg
- b. Hans Jenny
- c. Vasily V. Dokuchaev
- d. Konstantin D. Glinka

Answer: c

36. What does Soil Taxonomy serve as, and when was it released as a basic system for soil classification?

- a. A static system
- b. A dynamic system
- c. Released in 1951
- d. Released in 1975

Answer: b, d

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37. What are Pedon and Polypedon in Soil Taxonomy, and how do they differ?

- a. They both have lateral boundaries
- b. Pedons have lateral boundaries, while polypedons do not
- c. Polypedons have lateral boundaries, while pedons do not
- d. Neither pedons nor polypedons have lateral boundaries

Answer: b

38. What are some key features of Soil Taxonomy?

- a. Only diagnostic horizons
- b. Only hierarchical structure
- c. Classification criteria, hierarchical structure, diagnostic horizons, global applicability, dynamic nature
- d. Only global applicability

Answer: c

39. What is the dynamic nature of Soil Taxonomy, and how does it develop over time?

- a. It remains static
- b. It is updated as new research and knowledge emerge
- c. It was last updated in 1975
- d. It excludes advances in soil science

Answer: b

40. What distinguishes soil horizons from layers in soil classification, and what are Epipedons in Soil Taxonomy?

- a. Horizons are a result of pedogenesis, layers are not; Epipedons are diagnostic surface horizons
- b. Layers are a result of pedogenesis, horizons are not; Epipedons are diagnostic subsurface horizons
- c. Both are results of pedogenesis; Epipedons are diagnostic subsurface horizons
- d. Both are results of pedogenesis; Epipedons are diagnostic surface horizons

Answer: a