



## Unit III: Soil Erosion and Conservation

### 1. Introduction & Classification of Soil Erosion

#### Types of Soil Erosion (Water & Wind) and Stages of Water Erosion

**1. What is soil erosion?**

- a) Formation of new soil from parent rock
- b) Removal or destruction of topsoil by natural agents like wind and running water
- c) Addition of organic matter to the soil
- d) Compaction of soil due to heavy machinery

**2. Which of the following is the most common agent of soil erosion?**

- a) Wind
- b) Gravity
- c) Water
- d) Glaciers

**3. Which type of erosion is caused by the impact of raindrops on bare soil?**

- a) Sheet erosion
- b) Rill erosion
- c) Splash erosion
- d) Gully erosion

**4. The uniform removal of soil in thin layers across a broad area is called:**

- a) Splash erosion
- b) Rill erosion
- c) Gully erosion
- d) Sheet erosion

**5. Small finger-shaped channels less than 30 cm deep formed by concentrated water flow are called:**

- a) Gullies
- b) Rills
- c) Terraces
- d) Bunds

**6. When rills deepen beyond 0.3 meters, they are classified as:**

- a) Sheet erosion features
- b) Splash erosion features
- c) Gullies
- d) Stream banks

**7. Which agent of erosion involves the lifting and transport of loose soil particles by air movement?**



- a) Water erosion
- b) Glacial erosion
- c) Wind erosion
- d) Gravitational erosion

**8. The type of wind erosion where medium-sized particles (0.05-0.5 mm) bounce across the surface is called:**

- a) Suspension
- b) Surface creep
- c) Saltation
- d) Abrasion

**9. Very fine soil particles (<0.1 mm) carried high into the air and transported over long distances undergo:**

- a) Saltation
- b) Surface creep
- c) Suspension
- d) Hydraulic action

**10. The movement of large soil particles (0.5-2 mm) by rolling across the surface is termed:**

- a) Suspension
- b) Saltation
- c) Surface creep
- d) Sheet flow

**11. Which of the following is NOT a type of water erosion?**

- a) Splash erosion
- b) Saltation erosion
- c) Rill erosion
- d) Gully erosion

**12. The correct sequence of water erosion stages from first to last is:**

- a) Sheet → Splash → Rill → Gully
- b) Splash → Sheet → Rill → Gully
- c) Rill → Sheet → Splash → Gully
- d) Gully → Rill → Sheet → Splash

**13. Which type of water erosion creates channels that CANNOT be removed by normal cultivation?**

- a) Sheet erosion
- b) Rill erosion
- c) Gully erosion
- d) Splash erosion



**14. The process by which wind lifts larger particles for short distances, dislodging more soil as they fall back, is:**

- a) Suspension
- b) Surface creep
- c) Saltation
- d) Deflation

**15. Which type of soil is MOST prone to wind erosion?**

- a) Clay soil with high moisture
- b) Loose, dry, smooth soil with sparse vegetation
- c) Compacted soil with grass cover
- d) Forest soil with leaf litter

**16. The threshold wind velocity for initiating soil particle movement is approximately:**

- a) 5-10 km/hr
- b) 12-19 km/hr
- c) 25-30 km/hr
- d) 40-50 km/hr

**17. Which stage of water erosion is the first to occur on bare soil?**

- a) Sheet erosion
- b) Rill erosion
- c) Gully erosion
- d) Splash erosion

**18. The explosive impact of raindrops can splash soil particles up to what height?**

- a) 0.10 meter
- b) 0.30 meter
- c) 0.60 meter
- d) 1.00 meter

**19. Rills are typically less than:**

- a) 15 cm deep and 30 cm wide
- b) 30 cm deep and 50 cm wide
- c) 50 cm deep and 100 cm wide
- d) 100 cm deep and 200 cm wide

**20. The primary mechanism by which raindrops cause soil detachment is through:**

- a) Chemical dissolution
- b) Kinetic energy transfer
- c) Thermal expansion
- d) Biological activity



**21. Which of the following human activities is the leading cause of accelerated soil erosion?**

- a) Crop rotation
- b) Deforestation
- c) Mulching
- d) Contour farming

**22. In the context of wind erosion, "desertification" refers to:**

- a) Planting trees in deserts
- b) Non-desert areas developing desert-like conditions
- c) Irrigation of arid lands
- d) Formation of sand dunes

**23. The three phases of water erosion in correct order are:**

- a) Transportation → Detachment → Deposition
- b) Deposition → Transportation → Detachment
- c) Detachment → Transportation → Deposition
- d) Detachment → Deposition → Transportation

**24. The three phases of wind erosion in correct order are:**

- a) Deposition → Transportation → Initiation
- b) Initiation → Transportation → Deposition
- c) Transportation → Initiation → Deposition
- d) Initiation → Deposition → Transportation

**25. Soil erosion caused by the force of gravity is known as:**

- a) Hydraulic erosion
- b) Glacial erosion
- c) Gravitational erosion
- d) Aeolian erosion

**26. Which of the following is NOT an agent of soil erosion?**

- a) Water
- b) Wind
- c) Fertilizer application
- d) Glaciers

**27. The transport mechanism that accounts for 50-75% of total soil movement in wind erosion is:**

- a) Suspension
- b) Surface creep
- c) Saltation
- d) Solution



**28. Which type of erosion is characterized by the formation of "bad-land" topography?**

- a) Sheet erosion
- b) Rill erosion
- c) Gully erosion
- d) Splash erosion

**29. The process of soil particle detachment by flowing water is primarily caused by:**

- a) Hydraulic pressure and shear force
- b) Evaporation
- c) Condensation
- d) Freezing

**30. Which of the following best defines "geologic erosion"?**

- a) Erosion caused entirely by human activities
- b) Erosion under natural vegetation where soil loss equals soil formation
- c) Erosion that only occurs in desert regions
- d) Erosion caused by volcanic activity

**31. A farmer notices that after heavy rainfall, small channels have formed in his field that are approximately 20 cm deep. These channels can be removed by normal ploughing.**

**What type of erosion is this?**

- a) Sheet erosion
- b) Rill erosion
- c) Gully erosion
- d) Splash erosion

**32. In a desert region with strong winds, a farmer observes that fine dust particles are being carried high into the atmosphere and disappearing from view. What transport mechanism is occurring?**

- a) Saltation
- b) Surface creep
- c) Suspension
- d) Abrasion

**33. A construction site has exposed bare soil on a 15% slope. During a rainstorm, the soil surface shows small craters and splashed particles. What type of erosion is occurring first?**

- a) Sheet erosion
- b) Rill erosion
- c) Gully erosion
- d) Splash erosion

**34. After several years of intensive tillage on a gentle slope, a farmer notices that the topsoil has become uniformly thinner across the entire field without visible channels. This indicates:**



- a) Rill erosion
- b) Gully erosion
- c) Sheet erosion
- d) Tunnel erosion

**35. A landowner in Rajasthan notices that large soil particles are rolling along the ground surface during dust storms. This movement is classified as:**

- a) Saltation
- b) Surface creep
- c) Suspension
- d) Sheet flow

**36. A farmer clears a forested hillside for cultivation. Within two years, deep channels (>50 cm) appear that cannot be crossed with farm equipment. The land is becoming unsuitable for farming. This represents:**

- a) Sheet erosion progressing to rill erosion
- b) Rill erosion progressing to gully erosion
- c) Splash erosion only
- d) Wind erosion only

**37. During a windstorm in a cultivated field, a farmer sees sand-sized particles bouncing 2-3 cm above the surface, then falling back to dislodge more particles. This transport mechanism is:**

- a) Suspension
- b) Saltation
- c) Surface creep
- d) Deflation

**38. Which landscape would likely experience the highest rate of water erosion?**

- a) Flat forest land with dense canopy
- b) Gentle slope with grass cover
- c) Steep slope with bare soil after deforestation
- d) Floodplain with established vegetation

**39. A regional survey shows that topsoil depth has decreased from 25 cm to 15 cm over 20 years on gently sloping farmland. The erosion appears uniform across the surface. The dominant erosion type is:**

- a) Rill erosion
- b) Sheet erosion
- c) Gully erosion
- d) Tunnel erosion

**40. Which condition would most accelerate wind erosion?**

- a) High soil moisture content



- b) Presence of crop residue cover
- c) Removal of all vegetation and tillage of dry soil
- d) Compacted soil surface

**41. A farmer observes that after converting from forest to cropland, the soil becomes less fertile despite fertilizer application. The most likely cause is:**

- a) Loss of topsoil through erosion
- b) Increased soil pH
- c) Reduced wind speed
- d) Increased soil moisture

**42. In a semi-arid region, a land manager notices that medium-sized soil particles are being transported primarily through bouncing motion. To control this, the manager should focus on:**

- a) Increasing surface roughness and vegetation cover
- b) Adding more water to the soil
- c) Compacting the soil surface
- d) Removing all vegetation

**43. A gully is actively growing at its upper end (headcut). This type of gully is classified as:**

- a) Stable gully
- b) Active gully with headcut advancement
- c) Abandoned gully
- d) Rill stage

**44. If soil particles are observed moving only a few meters from their source during a wind event and are larger than 0.5 mm, the transport mechanism is:**

- a) Suspension
- b) Saltation
- c) Surface creep
- d) Abrasion

**45. Which factor would increase the erosive power of flowing water?**

- a) Decreased slope gradient
- b) Increased vegetation cover
- c) Increased flow velocity and volume
- d) Increased soil aggregation

**46. A land parcel shows both small channels (15 cm deep) and areas of uniform soil removal. The erosion process is likely in the transition between:**

- a) Splash and sheet erosion
- b) Sheet and rill erosion
- c) Rill and gully erosion
- d) Gully and stream bank erosion



**47. Which soil texture would be MOST susceptible to wind erosion when dry and bare?**

- a) Heavy clay
- b) Silty loam
- c) Sandy loam
- d) Peat

**48. A farmer notices that after a rainstorm, the soil surface has formed a crust that reduces water infiltration. This crust likely formed due to:**

- a) Gully erosion
- b) Splash erosion breaks soil aggregates
- c) Wind deposition
- d) Glacial action

**49. In the Chambal River Valley of India, which type of erosion is most prevalent?**

- a) Sheet erosion
- b) Rill erosion
- c) Gully erosion
- d) Tunnel erosion

**50. Which natural agent is primarily responsible for erosion in the high-altitude Himalayan region?**

- a) Wind erosion only
- b) Glacial and water erosion
- c) Coastal erosion only
- d) Wind erosion only

**51. A farmer observes water seeping at the foot of a slope and fine sediment fans downhill. The land is in a foothill region at 600m elevation. This indicates:**

- a) Sheet erosion
- b) Rill erosion
- c) Tunnel erosion
- d) Coastal erosion

**52. During a storm, waves are eroding the bank of a reservoir. This type of erosion is classified as:**

- a) Glacial erosion
- b) Wind erosion
- c) Coastal/water wave erosion
- d) Tunnel erosion

**53. Which scenario would result in the highest rate of splash erosion?**

- a) Dense forest with heavy rainfall
- b) Bare soil with light drizzling rain



- c) Bare soil with high-intensity rainfall
- d) Grass-covered slope with moderate rainfall

**54. A landowner notices that his field has developed small depressions and collapsed areas after several heavy rain events. The subsoil is known to be dispersive. This is characteristic of:**

- a) Sheet erosion
- b) Rill erosion
- c) Tunnel erosion
- d) Splash erosion

**55. In an area with 8% slope and annual rainfall of 700 mm, a farmer observes that after each rain, water flows in concentrated paths, creating small channels. If left untreated, these channels will likely:**

- a) Disappear naturally
- b) Evolve into gullies
- c) Convert to sheet erosion
- d) Form windbreaks

**56. Match the following erosion types with their characteristics:**

Column A	Column B
1. Splash erosion	A. Uniform removal of thin soil layers
2. Sheet erosion	B. Channels <30 cm deep
3. Rill erosion	C. Raindrop impact dislodging particles
4. Gully erosion	D. Channels >50 cm deep, permanent

- a) 1-C, 2-A, 3-B, 4-D
- b) 1-A, 2-B, 3-C, 4-D
- c) 1-C, 2-B, 3-A, 4-D
- d) 1-D, 2-C, 3-B, 4-A

**57. Match the following wind erosion transport mechanisms:**

Column A	Column B
1. Saltation	A. Particles <0.1 mm, long-distance travel
2. Suspension	B. Particles 0.5-2 mm, rolling movement
3. Surface creep	C. Particles 0.05-0.5 mm, bouncing motion

- a) 1-A, 2-B, 3-C
- b) 1-C, 2-A, 3-B



- c) 1-B, 2-C, 3-A  
d) 1-C, 2-B, 3-A

**58. Arrange the following in increasing order of severity (least to most severe):**

- a) Rill → Sheet → Splash → Gully  
b) Splash → Sheet → Rill → Gully  
c) Gully → Rill → Sheet → Splash  
d) Sheet → Splash → Gully → Rill

**59. Match the particle size with the appropriate wind transport mechanism:**

Particle Size	Mechanism
<0.1 mm	?
0.05-0.5 mm	?
0.5-2 mm	?

- a) <0.1 mm - Saltation; 0.05-0.5 mm - Suspension; 0.5-2 mm - Surface creep  
b) <0.1 mm - Suspension; 0.05-0.5 mm - Saltation; 0.5-2 mm - Surface creep  
c) <0.1 mm - Surface creep; 0.05-0.5 mm - Suspension; 0.5-2 mm - Saltation  
d) <0.1 mm - Saltation; 0.05-0.5 mm - Surface creep; 0.5-2 mm - Suspension

**60. Which of the following sequences represents the CORRECT progression of a gully through its classes (G1 to G4)?**

- a) G4 → G3 → G2 → G1  
b) G1 → G2 → G3 → G4  
c) G2 → G1 → G4 → G3  
d) G3 → G4 → G1 → G2

**61. Identify the erosion type based on the description: "Water flows through dispersive subsoils, creating tunnels that later collapse to form gullies."**

- a) Sheet erosion  
b) Rill erosion  
c) Tunnel erosion  
d) Coastal erosion

**62. Match the location with the predominant erosion type:**

Location	Erosion Type
1. Chambal River Valley	A. Glacial erosion
2. Himalayan foothills (500-750m)	B. Gully erosion
3. High altitude Himalayas	C. Tunnel erosion



- a) 1-A, 2-B, 3-C
- b) 1-B, 2-C, 3-A
- c) 1-C, 2-A, 3-B
- d) 1-B, 2-A, 3-C

**63. Identify the mechanism described: "Water-soluble contents present in the water are transported by water in solution form."**

- a) Saltation (in water)
- b) Suspension (in water)
- c) Solution transport
- d) Surface creep (in water)

**64. Match the following terms with their definitions in water erosion mechanics:**

Term	Definition
1. Hydraulic action	A. Mechanical breakdown of loads due to particle collision
2. Abrasion	B. Chemical action between water and soil/rocks
3. Attrition	C. Pressure from air voids causing soil detachment
4. Solution	D. Scouring action of soil particles mixed with water

- a) 1-C, 2-D, 3-A, 4-B
- b) 1-D, 2-C, 3-B, 4-A
- c) 1-A, 2-B, 3-C, 4-D
- d) 1-B, 2-A, 3-D, 4-C

**65. Match the following factors with their roles in soil erosion:**

Factor	Role
1. Vegetation cover	A. Increases flow velocity and erosion
2. Steep slope	B. Binds soil and intercepts rainfall
3. High wind speed	C. Increases detachment and transport
4. Soil organic matter	D. Improves soil structure and resistance

- a) 1-B, 2-A, 3-C, 4-D
- b) 1-A, 2-B, 3-D, 4-C
- c) 1-C, 2-D, 3-A, 4-B
- d) 1-D, 2-C, 3-B, 4-A

**66. Identify the correct sequence of geological feature formation due to water erosion:**

- a) Valleys → Streams → Gullies → Rills
- b) Streams → Rills → Gullies → Valleys



c) Rills → Gullies → Streams → Valleys

d) Gullies → Rills → Valleys → Streams

**67. Match the following desertification indicators with their descriptions:**

Indicator	Description
1. Soil crusting	A. Permanent loss of productive land
2. Sand dune formation	B. Reduced infiltration from splash erosion
3. Irreversible degradation	C. Wind deposition creating mobile landforms

a) 1-A, 2-B, 3-C

b) 1-B, 2-C, 3-A

c) 1-C, 2-A, 3-B

d) 1-B, 2-A, 3-C

**68. Identify the correct categorization of erosion agents:**

Agent	Type of Erosion
1. Running water	A. Glacial erosion
2. Wind	B. Water erosion
3. Glaciers	C. Aeolian erosion
4. Gravity	D. Mass movement

a) 1-B, 2-C, 3-A, 4-D

b) 1-C, 2-B, 3-D, 4-A

c) 1-D, 2-A, 3-C, 4-B

d) 1-A, 2-D, 3-B, 4-C

**69. Arrange the following soil particle sizes from MOST to LEAST easily eroded by wind:**

a) 0.01 mm → 0.1 mm → 0.5 mm → 1.0 mm

b) 1.0 mm → 0.5 mm → 0.1 mm → 0.01 mm

c) 0.5 mm → 0.1 mm → 1.0 mm → 0.01 mm

d) 0.01 mm → 0.5 mm → 1.0 mm → 0.1 mm

**70. Match the following human activities with their primary erosion effect:**

Activity	Primary Effect
1. Deforestation	A. Soil compaction and vegetation removal
2. Overgrazing	B. Exposure of bare soil to rainfall
3. Ploughing up/down slope	C. Increased water flow velocity



4. Monoculture	D. Reduced root diversity and soil binding
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- a) 1-B, 2-A, 3-C, 4-D  
 b) 1-A, 2-B, 3-D, 4-C  
 c) 1-C, 2-D, 3-A, 4-B  
 d) 1-D, 2-C, 3-B, 4-A

**71. Match the following terms with their descriptions in wind erosion:**

Term	Description
1. Saltation	A. Particles <0.1 mm, can travel thousands of km
2. Suspension	B. Particles 0.5-2 mm, moves only a few meters
3. Surface creep	C. Particles 0.05-0.5 mm, bouncing movement

- a) 1-A, 2-B, 3-C  
 b) 1-C, 2-A, 3-B  
 c) 1-B, 2-C, 3-A  
 d) 1-C, 2-B, 3-A

**72. Match the rainfall characteristic with its erosion effect:**

Rainfall Type	Primary Erosion Effect
1. High intensity short duration	A. Prolonged soil saturation and mass movement
2. Low intensity long duration	B. High splash erosion and runoff generation
3. Drizzle	C. Minimal erosion, mainly infiltration

- a) 1-A, 2-B, 3-C  
 b) 1-B, 2-A, 3-C  
 c) 1-C, 2-A, 3-B  
 d) 1-B, 2-C, 3-A

**73. Identify the correct sequence of wind erosion transport mechanisms from INITIAL to FINAL:**

- a) Suspension → Saltation → Surface creep  
 b) Surface creep → Saltation → Suspension  
 c) Saltation → Surface creep → Suspension  
 d) Surface creep → Suspension → Saltation

**74. Match the slope category with the predominant erosion type :**

Slope Range	Predominant Erosion/Use
1:4 to 1:7	A. Terracing is required for cropping



>1:7 (steeper)	B. Proper farming possible
>33%	C. Forestry operations

- a) 1-A, 2-B, 3-C  
 b) 1-B, 2-A, 3-C  
 c) 1-C, 2-B, 3-A  
 d) 1-B, 2-C, 3-A

**75. Match the following with their correct pairings:**

Column A	Column B
1. Splash erosion	i. Caused by concentrated flow in deep channels
2. Sheet erosion	ii. Caused by raindrop impact
3. Rill erosion	iii. Uniform removal of soil layer
4. Gully erosion	iv. Small channels removable by tillage

- a) 1-ii, 2-iii, 3-iv, 4-i  
 b) 1-iii, 2-ii, 3-i, 4-iv  
 c) 1-iv, 2-i, 3-ii, 4-iii  
 d) 1-i, 2-iv, 3-iii, 4-ii

**76. Which of the following are stages of water erosion in correct order?**

- i. Splash erosion  
 ii. Gully erosion  
 iii. Sheet erosion  
 iv. Rill erosion

- a) i, iii, iv, ii  
 b) ii, iv, iii, i  
 c) iii, i, ii, iv  
 d) i, ii, iii, iv

**77. Which factors increase the risk of wind erosion?**

- i. Sparse or absent vegetative cover  
 ii. Loose, dry, smooth soil surface  
 iii. Large fields  
 iv. Strong winds

- a) i and ii only  
 b) ii and iii only  
 c) i, ii, iii, and iv  
 d) i, iii, and iv only

**78. Which of the following are forms of water erosion?**

- i. Splash erosion
- ii. Sheet erosion
- iii. Saltation erosion
- iv. Gully erosion

- a) i, ii, and iv only
- b) i, ii, and iii only
- c) ii, iii, and iv only
- d) i, iii, and iv only

**79. Which of the following are characteristics of gully erosion?**

- i. Channels deeper than 50 cm
- ii. Cannot be removed by normal cultivation
- iii. Often develops from enlarged rills
- iv. Is the least severe form of water erosion

- a) i, ii, and iii only
- b) i, ii, and iv only
- c) i, iii, and iv only
- d) ii, iii, and iv only

**80. Which of the following statements about suspension in wind erosion is/are correct?**

- i. Involves particles less than 0.1 mm in diameter
- ii. Particles remain suspended in the air for long distances
- iii. Contributes to dust storm formation
- iv. Is the primary mechanism for moving large sand grains

- a) i, ii, and iii only
- b) i, ii, and iv only
- c) ii, iii, and iv only
- d) i, iii, and iv only

**81. Which human activities accelerate soil erosion?**

- i. Deforestation
- ii. Overgrazing
- iii. Contour ploughing
- iv. Monoculture farming

- a) i, ii, and iii only
- b) i, ii, and iv only
- c) ii, iii, and iv only
- d) i, iii, and iv only

**82. Which of the following are natural agents of soil erosion?**

- i. Running water
  - ii. Wind
  - iii. Deforestation
  - iv. Glaciers
- a) i, ii, and iii only
  - b) i, ii, and iv only
  - c) ii, iii, and iv only
  - d) i, iii, and iv only

**83. Which of the following correctly describe splash erosion?**

- i. Caused by raindrop impact
  - ii. Dislodged particles can rise up to 0.6 m
  - iii. Is the first stage of water erosion
  - iv. Only occurs on slopes greater than 30%
- a) i, ii, and iii only
  - b) i, ii, and iv only
  - c) i, iii, and iv only
  - d) ii, iii, and iv only

**84. Which factors influence the rate of water erosion?**

- i. Slope gradient
  - ii. Vegetation cover
  - iii. Soil type and structure
  - iv. Rainfall intensity
- a) i, ii, and iii only
  - b) i, ii, and iv only
  - c) ii, iii, and iv only
  - d) i, ii, iii, and iv

**85. Which of the following statements about rill erosion are correct?**

- i. Rills are typically less than 30 cm deep
  - ii. Rills can be removed by normal cultivation
  - iii. Rills are permanent features that make land unusable
  - iv. Rills can develop into gullies if untreated
- a) i, ii, and iii only
  - b) i, ii, and iv only
  - c) i, iii, and iv only
  - d) ii, iii, and iv only

**86. Which of the following correctly describes saltation in wind erosion?**

- i. Particles move in a series of short jumps/bounces
- ii. Accounts for the majority of soil movement (50-75%)
- iii. Dislodges additional soil particles upon impact
- iv. Involves particles <0.05 mm in diameter

- a) i, ii, and iii only
- b) i, ii, and iv only
- c) i, iii, and iv only
- d) ii, iii, and iv only

**87. Which regions/landscapes in India are correctly matched with their predominant erosion type?**

- i. Chambal River Valley - Gully erosion
- ii. Himalayan foothills (500-750m) - Tunnel erosion
- iii. High altitude Himalayas - Glacial erosion
- iv. Coastal areas - Wind erosion only

- a) i, ii, and iii only
- b) i, ii, and iv only
- c) i, iii, and iv only
- d) ii, iii, and iv only

**88. Which of the following statements about coastal erosion are correct?**

- i. Waves are the primary agent of coastal erosion
- ii. Geology of the coastline affects erosion rate
- iii. Headlands experience less erosion than bays
- iv. Wider beaches cause more wave energy loss due to friction

- a) i, ii, and iii only
- b) i, ii, and iv only
- c) i, iii, and iv only
- d) ii, iii, and iv only

**89. Which of the following are components of water erosion mechanics?**

- i. Hydraulic action
- ii. Abrasion
- iii. Attrition
- iv. Solution transport

- a) i, ii, and iii only
- b) i, ii, and iv only
- c) ii, iii, and iv only
- d) i, ii, iii, and iv



**90. Which of the following correctly describes the impacts of soil erosion?**

- i. Loss of fertile topsoil
- ii. Reduced agricultural productivity
- iii. Sedimentation in rivers and reservoirs
- iv. Increased water infiltration

- a) i, ii, and iii only
- b) i, ii, and iv only
- c) i, iii, and iv only
- d) ii, iii, and iv only

**91. Which of the following statements about the Universal Soil Loss Equation (USLE) are correct?**

- i. Estimates annual soil loss
- ii. Includes factors for rainfall, soil, slope, cover, and practices
- iii. Accounts for gully erosion
- iv. Does not account for deposition

- a) i, ii, and iii only
- b) i, ii, and iv only
- c) i, iii, and iv only
- d) ii, iii, and iv only

**92. Which of the following are reasons why bare land is most prone to erosion?**

- i. No vegetation to intercept rainfall
- ii. No roots to bind soil particles
- iii. Soil surface becomes dry and loose
- iv. Increased organic matter content

- a) i, ii, and iii only
- b) i, ii, and iv only
- c) i, iii, and iv only
- d) ii, iii, and iv only

**93. Which of the following correctly sequences the development of water erosion features from INITIAL to ADVANCED?**

- a) Bare soil → Splash craters → Sheet flow → Rills → Gullies
- b) Gullies → Rills → Sheet flow → Splash craters → Bare soil
- c) Sheet flow → Bare soil → Splash craters → Gullies → Rills
- d) Rills → Splash craters → Bare soil → Sheet flow → Gullies

**94. Which of the following are characteristics of wind erosion in arid regions?**

- i. Saltation is the primary transport mechanism
- ii. Suspension contributes to regional dust storms



iii. Surface creep moves the largest particles

iv. Vegetation increases erosion rates

- a) i, ii, and iii only
- b) i, ii, and iv only
- c) i, iii, and iv only
- d) ii, iii, and iv only

**95. Which of the following statements about sheet erosion are correct?**

- i. Soil is removed in thin, uniform layers
- ii. Often goes unnoticed until significant topsoil loss occurs
- iii. Results in loss of finest soil particles and nutrients
- iv. Creates visible deep channels

- a) i, ii, and iii only
- b) i, ii, and iv only
- c) i, iii, and iv only
- d) ii, iii, and iv only

**96. Which of the following factors contribute to wind erosion severity?**

- i. Wind speed and duration
- ii. Soil moisture content
- iii. Surface roughness
- iv. Presence of windbreaks

- a) i, ii, and iii only
- b) i, ii, and iv only
- c) i, iii, and iv only
- d) i, ii, iii, and iv

**97. Which of the following correctly describes tunnel erosion?**

- i. Occurs in dispersive subsoils
- ii. Common in foothills at 500-750m elevation
- iii. Surface water moves through cracks and root cavities
- iv. Tunnel roof collapse leads to potholes and gullies

- a) i, ii, and iii only
- b) i, ii, and iv only
- c) i, iii, and iv only
- d) i, ii, iii, and iv

**98. Which of the following are characteristics of glacial erosion?**

- i. Occurs in cold, high-altitude regions
- ii. Glaciers pick up soil and rocks during movement



- iii. Deposits debris when ice melts
  - iv. Is the most common form of erosion in tropical regions
- a) i, ii, and iii only
  - b) i, ii, and iv only
  - c) i, iii, and iv only
  - d) ii, iii, and iv only

**99. Which of the following correctly describes the role of organic matter in erosion control?**

- i. Improves soil structure and aggregation
  - ii. Increases water infiltration
  - iii. Reduces soil erodibility
  - iv. Makes soil more susceptible to wind erosion
- a) i, ii, and iii only
  - b) i, ii, and iv only
  - c) i, iii, and iv only
  - d) ii, iii, and iv only

**100. Which of the following statements about the relationship between slope and erosion is/are correct?**

- i. Steeper slopes generally have higher erosion rates
  - ii. Slope length affects the volume of runoff accumulation
  - iii. Terracing reduces effective slope length
  - iv. Erosion is independent of slope gradient
- a) i, ii, and iii only
  - b) i, ii, and iv only
  - c) i, iii, and iv only
  - d) ii, iii, and iv only