



- (x) In Universal Soil loss Equation '\R\' defines
- a) Soil erodibility factor  
 b) Slop-length factor  
 c) Slope Gradient  
 d) Rainfall factor
- (xi) In acid sulphate soils when pH below 4, very active bacteria is
- a) Thiobacillus thiooxidans  
 b) Thiobacillus ferrooxidans  
 c) Thiobacillus denitrificans  
 d) Bacillus
- (xii) In Universal Soil loss Equation '\S\' defines
- a) Soil erodibility factor  
 b) Slop-length factor  
 c) Slope Gradient  
 d) Rainfall factor
- (xiii) Sodicity of irrigation water can be explained by
- a) Base saturation  
 b) SAR  
 c) AEC  
 d) CEC
- (xiv) The water erosion which is not noticed by farmer is
- a) Splash erosion  
 b) Sheet erosion  
 c) Rill erosion  
 d) Gully erosion
- (xv) Which of the following is called Removal of excess water
- a) Leaching  
 b) Drainage  
 c) Laterization  
 d) Podzolization
- (xvi) The movement of soil particles through bounces / jumps is related to
- a) saltation  
 b) Suspension  
 c) Surface creep  
 d) Ballistic movement
- (xvii) When the sensing device detects EMR (Electro Magnetic Radiation) originating from another source, primarily from sun is called
- a) Active Sensing  
 b) Passive sensing  
 c) Both Active and Passive  
 d) EMR sensing
- (xviii) Which of the following type of wind erosion represents floating of small sized particles in the air stream is
- a) saltation  
 b) Suspension  
 c) Surface creep  
 d) Diffusion
- (xix) The abbreviation of NDVI interpretes
- a) Normalized Difference Vegetation Index  
 b) Normalized Difference Variety Index  
 c) Normalized Digital Vegetation Index  
 d) Normalized Differentiate Vegetation Index
- (xx) Gully erosion stages are related to
- a) Formation  
 b) Development  
 c) Healing  
 d) All

### Group-B

(Short Answer Type Questions)

2.5 x  
 10=25

2. Explain the Iron or Aluminium ion effects in soil acidity (give the reaction) (2.5)
3. Discuss the acid soil distribution in India (2.5)
4. Explain the term lime requirement (2.5)
5. Explain the effect of overliming in the soil (2.5)
6. Explain the chemical factors of saline soils (2.5)
7. Express the relation between Electrical Conductivity and Osmotic potential (2.5)
8. Explain the term SAR (2.5)
9. Estimate the leaching requirement (LR) of an irrigation water having electrical conductivity of 3 ds/m. When electrical conductivity of drainage water is 8 ds/m (2.5)
10. Explain the principle of remote sensing (2.5)
11. Evaluate the gypsum is not considered as a Liming material? (2.5)

Library  
Brainware University  
308, Ramkrishnapur Road, Barasat  
Kolkata, West Bengal-700125

OR

Estimate the CCE value of dolomite

(2.5)

**Group-C**

(Long Answer Type Questions)

5 x 1=5

12. Explain the Fe and Mn chemistry of submerged soil

(5)

OR

Explain the four reasons of less availability of Zinc in submerged soil

(5)

\*\*\*\*\*