

- a) Thiobacillus thiooxidans
c) Thiobacillus denitrificans
- (x) The process by which alkali soil or sodic soil will develop
a) Alkalization
c) Gleization
- (xi) What is the another name of Sodic soils ?
a) Black alkali soils
c) Kallar soils
- (xii) Which define the Sodidity of irrigation water ?
a) Base saturation
c) AEC
- (xiii) What is the term by which salinity is measured ?
a) EC
c) AEC
- (xiv) EC of irrigation water is 4 and EC of drainage water is 2 then what is the leaching requirement
a) 100
c) 150
- (xv) By which formula Exchangeable Sodium Percentage (ESP) can be calculate ?
a) $[\text{Exchangeable Na}/\text{CEC}] \times 100$
c) $[\text{Exchangeable Na}/\text{AEC}] \times 100$
- (xvi) What is the value of RSC (me/L) in irrigation water is injurious for plant growth
a) <2.5
c) <3.0
- (xvii) Choose the Safe limit for Residual Sodium Carbonate
a) <1.25
c) 1.75
- (xviii) Which of the following is called Removal of excess water
a) Leaching
c) Laterization
- (xix) When the sensing device detects EMR (Electro Magnetic Radiation) originating from another source, primarily from sun is called
a) Active Sensing
c) Both Active and Passive
- (xx) What of the following Colour for the Land Capability Class-II on LCC maps is
a) Yellow
c) Blue
- b) Thiobacillus ferrooxidans
d) Bacillus
- b) Salinization
d) Pedoturbation
- b) Usar soils
d) All the these
- b) SAR
d) CEC
- b) pH
d) CEC
- b) 200
d) 250
- b) $[\text{Exchangeable Na}/\text{CEC}] \times 10$
d) $[\text{Exchangeable bases}/\text{CEC}] \times 100$
- b) >2.5
d) >1.5
- b) 1.5
d) 2
- b) Drainage
d) Podzolization
- b) Passive sensing
d) EMR sensing
- b) Red
d) Green

Group-B

(Short Answer Type Questions)

2.5 x
10=25

2. Elaborate the reason of Soil Acidity development. (2.5)
3. Explain the Iron or Aluminium ion effects in soil acidity (give the reaction) (2.5)
4. Explain the names of liming material (2.5)
5. Explain the factors that relate the efficiency of liming materials (2.5)
6. Illustrate the term Neutralizing value or CCE (2.5)
7. Classify the difference between Lime requirement and Liming factor (2.5)
8. Explain the term Neutralizing value or CCE (2.5)
9. How to develop Soil Acidity by the use of acidic fertilizer (2.5)
10. 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)

11. Discuss the acid soil distribution in India

(2.5)

OR

Discuss the reason of Fe or Mn toxicity development in acid soil.

(2.5)

Group-C

(Long Answer Type Questions)

5 x 1=5

12. Explain the principles of liming reaction

(5)

OR

Explain the term "Land capability classification"

(5)
