Unit 7 - Week 5

Assignment 5

The due date for submitting this assignment has passed.
As per our records you have not submitted this assignment.

Due on 2020-10-21, 23:59 IST.

1) Ion with positive charge is known as? 1 point

a) Cation
b) Anion
c) Positron
d) Negatron

a)
b)
c)
d)

No, the answer is incorrect.
Score: 0
Accepted Answers:
a)

2) Cation exchange capacity (CEC) of a soil is the measure of quantity of _____ charged sites on soil surfaces that can retain _____ charged ions by electrostatic forces? 1 point

a) Positive, negative
b) Negative, positive
c) Positive, positive
d) Negative, negative

a)
b)
c)
d)

No, the answer is incorrect.
Score: 0
Accepted Answers:
b)

3) The buffered methods of measuring CEC will determine _____? 1 point

a) Effective CEC
b) True CEC
c) Potential or maximum CEC
d) All of the above

a)
b)
c)
d)

No, the answer is incorrect.
Score: 0
Accepted Answers:
c)

4) The most widely used methods of determining CEC are? 1 point

a) Distillation method
b) Centrifuge method
c) Both a and b
d) None of the above

a)
b)
c)
d)

No, the answer is incorrect.
Score: 0
Accepted Answers:
c)

5) Ion Exchange Capacity (IEC) is expressed as _____?

(CEC = Cation Exchange Capacity, AEC = Anion Exchange Capacity) 1 point

a) IEC = CEC/AEC
b) IEC = CEC+AEC
c) IEC = CEC*AEC
d) IEC = CEC - AEC

a)
b)
c)
d)

No, the answer is incorrect.
Score: 0
Accepted Answers:
b)

6) Which of the following is True with respect to AEC and pH? 1 point

a) AEC is unaffectedby pH
b) AEC increases with increase in pH
c) AEC decreases with increase in pH
d) AEC first increases then decreases with an increase in pH

a)
b)
c)
d)

No, the answer is incorrect.
Score: 0
Accepted Answers:
c)

7) Hydrogen bond is found in which of the following clay mineral? 1 point

a) Kaolinite
b) Montmorillonite
c) Vermiculite
d) Beidelite

a)
b)
c)
d)

No, the answer is incorrect.
Score: 0
Accepted Answers:
a)

8) Which of the following has the highest CEC? 1 point

a) Kaolinite
b) Smectite
c) Vermiculite
d) Humus

a)
b)
c)
d)

No, the answer is incorrect.
Score: 0
Accepted Answers:
d)

9) Percent base saturation is the % of CEC occupied by _____ ion/ions. 1 point

a) Al^{3+} and H^{+}
b) Ca^{2+}, Mg^{2+}, Na^{+}, K^{+}
c) Cr^{3+}
d) All of the above

a)
b)
c)
d)

No, the answer is incorrect.
Score: 0
Accepted Answers:
b)

10) Low CEC soils are _____. 1 point

a) Deficient in potassium and magnesium
b) Have low water holding capacity
c) Both a and b
d) None of the above

a)
b)
c)
d)

No, the answer is incorrect.
Score: 0
Accepted Answers:
c)

11) How many molc of K^{+} does it take to replace 12 molc of Ca^{2+}? 1 point

a) 0.5
b) 1
c) 2
d) 12

a)
b)
c)
d)

No, the answer is incorrect.
Score: 0
Accepted Answers:
d)

12) What will be the CEC of a soil which has 5 cmolc/kg of H^{+}, 6 cmolc/kg of Ca^{2+}, 3 cmolc/kg of Mg^{2+}, 2 cmolc/kg of Na^{+} and 1 cmolc/kg of K^{+} ? 1 point

a) 17 cmolc/kg
b) 12 cmolc/kg
c) 6 cmolc/kg
d) 3 cmolc/kg

a)
b)
c)
d)

No, the answer is incorrect.
Score: 0
Accepted Answers:
a)

13) As per Kerr, the selectivity coefficient for Ca-Mg exchange complex _____? 1 point

a) Increased with change in exchanger composition
b) Relatively constant as exchanger composition changed
c) Decreased with change in exchanger composition
d) None of the above

a)
b)
c)
d)

No, the answer is incorrect.
Score: 0
Accepted Answers:
b)

14) When a mixture of cations A and B is ideal, the exchanger phase activity coefficients for them will be given by _____. 1 point

a) $f_A = f_B = 0.1$
b) $f_A = f_B = 1$
c) $f_A = f_B = 10$
d) $f_A = f_B = 100$

a)
b)
c)
d)

No, the answer is incorrect.
Score: 0
Accepted Answers:
b)

15) The strength of adsorption of common cations on most colloids is in the order of? 1 point

a) $Al^{3+} > Ca^{2+} > Mg^{2+} > K^{+} = NH^{4+} > Na^{+}$
b) $Al^{3+} < Ca^{2+} > Mg^{2+} > K^{+} = NH^{4+} > Na^{+}$
c) $Al^{3+} < Ca^{2+} < Mg^{2+} < K^{+} = NH^{4+} < Na^{+}$
d) $Al^{3+} > Ca^{2+} < Mg^{2+} > K^{+} = NH^{4+} < Na^{+}$

a)
b)
c)
d)

No, the answer is incorrect.
Score: 0
Accepted Answers:
a)