Assignment 12

The due date for submitting this assignment has passed. Due on 2021-04-14, 23:59 IST.

As per our records you have not submitted this assignment.

1) Match the following sludge treatment type with respective sludge treatment process
   Treatment Type | Treatment Process
   -----------------|-------------------
   a) Chemical Treatment | i. Centrifuge
   b) Thermal Treatment | ii. Lime addition
   c) Thickening and dewatering | ii. Incineration

   No, the answer is incorrect.
   Score: 2
   Accepted Answers:
   i. a, b, c, d

2) Which class of micro-organisms are most active in anaerobic digestion of sludge?
   - Mesophiles and Hessophile
   - Psychrophiles and Thermophile
   - Mesophiles and Thermophile
   - Psychrophiles and Mesophiles

   No, the answer is incorrect.
   Score: 2
   Accepted Answers:
   Mesophiles and Hessophile

3) The sludge from the aeration tank of the activated sludge process (ASP) has solids content (by weight) of 3%. This sludge is put in a sludge thickener, where sludge volume is reduced to half. Assume that the amount of solids in the supernatant from the thickener is negligible, the specific gravity of solid solids is 2.6 and the density of water is 1000 kg/m3.
   What is the density (kg/m3) of the sludge removed from the aeration tank?

   No, the answer is incorrect.
   Score: 3
   Accepted Answers:
   3150, 1030

4) Which of the following is correct sludge handling sequence?
   - Stabilization > Thickening > Dewatering > Drying
   - Thickening > Stabilization > Dewatering > Drying
   - Dewatering > Thickening > Stabilization > Drying
   - None of above

   No, the answer is incorrect.
   Score: 3
   Accepted Answers:
   Stabilization > Thickening > Dewatering > Drying

5) In the context of anaerobic digestion, which of the following statement holds good?
   - Acids are necessary to be added to make the pH neutral
   - Bases are necessary to be added to make the pH neutral
   - A flocculant is necessary to bring about flocculation
   - A coagulant is necessary to add in order to bring about coagulation

   No, the answer is incorrect.
   Score: 3
   Accepted Answers:
   Acids are necessary to be added to make the pH neutral

6) What is the typical hydraulic retention time for a completely mixed anaerobic digestion process?
   - 15-30 days
   - 40-50 days
   - 60-60 days
   - 60-80 days

   No, the answer is incorrect.
   Score: 3
   Accepted Answers:
   30-50 days

7) Which of the following is used as bulking agent in composting?
   - Saw dust
   - Food waste
   - Immature compost
   - None of above

   No, the answer is incorrect.
   Score: 3
   Accepted Answers:
   Saw dust

8) Which of the following is a common sludge conditioning agent?
   - Ferric Chloride
   - Sulphuric Acid
   - Sodium Hydroxide
   - All of Above

   No, the answer is incorrect.
   Score: 3
   Accepted Answers:
   Ferric Chloride