Assignment 7

Due: Oct 29, 2020, 2:59 AM

1. Which of the following statements is used to calculate the yield per unit mass of substrate?
   a. GLS $\times 100$ $\times 100$ $\times 100$ $\times 100$
   b. GLS $\times 100$ $\times 100$ $\times 100$ $\times 100$
   c. GLS $\times 100$ $\times 100$ $\times 100$ $\times 100$
   d. None of the above

2. Which of the following reactor is used to support scale-up and multi-replication of anaerobic digester?
   a. Batch anaerobic digester
   b. Continuous anaerobic digester
   c. Two-stage anaerobic digester
   d. All of the above

3. The combination of organic fraction of biodegradable components that remains after treatment and is biodegraded as residual volatile solids (RVS).
   a. True
   b. False

4. Which of the following is used to verify the identity of a compound in a mixture?
   a. Bonded ion-exchange HPLC
   b. Size-exclusion HPLC
   c. Filter paper method
   d. None of the above

5. Which of the following methods is generally used to identify the volatile component of a mixture?
   a. GCMS
   b. IR spectroscopy
   c. Nuclear magnetic resonance
   d. None of the above

6. Which of the following is used as a buffering agent in composting?
   a. Ammonium acetate
   b. Potassium nitrate
   c. Calcium carbonate
   d. None of the above

7. Which of the following composting techniques is generally adopted in industrial composting?
   a. Windrow composting
   b. In-vessel composting
   c. Integrated windrow composting
   d. None of the above

8. Which of the following composting techniques require longer curing period?
   a. In-vessel composting
   b. Windrow composting
   c. Mechanical or mixed composting
   d. None of the above

9. What is the optimum temperature for the growth of mesophilic anaerobic bacteria?
   a. 20-28°C
   b. 30-37°C
   c. 40-50°C
   d. None of the above

10. What is the optimum pH value required during anaerobic digestion?
    a. 6.5-7.5
    b. 7.5-8.5
    c. 8.5-9.5
    d. None of the above