



Certification Boulevard

Test Your Knowledge of Various Wastewater Treatment Topics

1. What is the minimum velocity in a sanitary sewer pipeline necessary to prevent settling of solids and debris?
 - a. 1 fps
 - b. 0.5 fps
 - c. 2 fps
 - d. 2 fpm

2. What is the detention time in a primary clarifier that is 100 feet long, 25 feet wide, 13 feet deep, and the influent flow is 5 mgd?
 - a. 2.3 hours
 - b. 1.8 hours
 - c. 1.2 hours
 - d. 3.1 hours

3. Given the following data, what is the surface settling rate of the secondary clarifiers?
 - Three (3) Secondary Clarifiers
 - Each Clarifier Has a Diameter of 100 Feet
 - The Plant Influent Flow is 15 mgd
 - a. 637 gal/day/ft²
 - b. 3,414 gal/day/ft²
 - c. 736 gal/day/ft²
 - d. 159 gal/day/ft²

4. Given the following data, how many gallons of WAS should be removed if a 10 day SRT is the desired target?
 - Two (2) Aerations Tanks
 - Each Aeration Tank is 140 Feet Long, 45 Feet Wide, and 15 Feet Deep
 - The MLSS Concentration is 3,500 ppm
 - The WAS Concentration is 8,500 ppm
 - a. 1.12 mgd
 - b. 158,250 gpd
 - c. 20,790 gpd
 - d. 58,217 gpd

5. Which term is most related to vector attraction reduction in an aerobic digester?
 - a. Settleometer
 - b. Pathogen
 - c. SOUR
 - d. F/M

6. What does the term adsorption mean?
- Impregnate a liquid with air
 - The taking in of one substance in the body of another
 - To gather onto the surface of a substance
 - Soak like a sponge
7. Which chemical is most commonly for odor control when dealing with H₂S gas?
- Polymer
 - Sodium hydroxide
 - Alum
 - Water
8. Which activated sludge growth phase is considered to have the lowest F/M ratio, the highest SRT, the lowest sludge yield, and the worse oxygen utilization efficiency?
- High rate aeration
 - Extended aeration
 - Conventional aeration
 - Log growth
9. Which group of bacteria are facultative and are responsible for BOD₅ removal and denitrification in the activated sludge process?
- Heterotrophic
 - Nitrosomonas
 - Autotrophic
 - Fermenters
10. Given the following data, what is the sludge blanket detention time?
- Secondary Clarifier is 50 Feet Diameter
 - Sludge Blanket Depth is 3 Feet
 - Floor Slope is 1:12
 - Sludge Removed is 0.55 mgd
- 1.9 hours
 - 0.58 days
 - 2.4 hours
 - 12.5 hours