



# Certification Boulevard

## *Test Your Knowledge of Various Wastewater Process Topics*



1. In which form are nutrients better utilized by microorganisms in a biological treatment process?
  - A. Particulate
  - B. Solid
  - C. Gaseous
  - D. Soluble**
2. Which of the following best describes the term anoxic?
  - A. High dissolved oxygen is present
  - B. Nearly anaerobic; very low dissolved oxygen but nitrates and/or nitrites are present**
  - C. Completely anaerobic; no dissolved oxygen, nitrates, or nitrites.
  - D. Nitrates are very low
3. What is a typical RAS to Q ratio for an extended aeration activated sludge process?
  - A. 10% to 25%
  - B. 25% to 50%
  - C. 1% to 2%
  - D. 75% to 100%**
4. Which adjustment will create an increased contact time in the aeration tank?
  - A. Lower the weir
  - B. Increase the air supply rate
  - C. Decrease the WAS rate
  - D. Decrease the RAS rate**
5. What adjustment(s) may help if solids are rising in the secondary clarifier accompanied by large septic gas bubbles?
  - A. Increase aeration D.O.
  - B. Decrease RAS rate
  - C. Decrease WAS rate
  - D. Decrease aeration D.O.
  - E. Increase RAS rate
  - F. Both "a & e"**

6. What happens to the activity rate of activated sludge microorganisms as the wastewater temperature increases by 10°C?
- A. It triples
  - B. It doubles**
  - C. It remains the same
  - D. It is cut in half
7. Which term is most related to vector attraction reduction in an aerobic digester?
- A. Settleometer
  - B. Pathogen
  - C. SOUR**
  - D. F/M
8. What are the two (2) reaction forming stages of anaerobic digestion?
- A. Foam and oxygen
  - B. Acid and methane**
  - C. Volatile solids and total solids
  - D. Nitrogen and methanol
9. What does the term aliquot mean:
- A. Composite sample
  - B. Grab sample
  - C. The total volume of sample
  - D. A portion of a sample**
10. What does the term loading refer to in the activated sludge process?
- A. Pounds of MLVSS under aeration
  - B. cfm of air supplied to the aeration tank
  - C. Pounds of CBOD<sub>5</sub> entering the aeration tank**
  - D. Amount of waste sludge removed from the system

*Please forward your comments, quiz questions and plant case studies for publication to:*

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Please complete the questionnaire and mail or email it to Roy Pelletier at the locations above. For your convenience, an electronic version of the Troubleshooting Way Questionnaire can be found on the FWRJ website <http://fwrj.com/troubleshootingway.html>