

- 1. What is the typical permit limitation for nitrates in Florida reuse water applications?
  - A. 25 to 30 mg/l
  - B. 1.5 to 3.5 mg/l
  - C. 1.0 to 1.5 mg/l
  - D. 10 to 12 mg/l
- 2. Other than sand, what is a typical media used in rapid gravity filters?
  - A. D.E. powder
  - B. Anthracite coal
  - C. Clay
  - D. Talcum powder
- 3. Calculate the annual savings for chlorine utilization, given the following data:
  - Plant Flow is 7.25 mgd
  - Chlorine Dose Rate is Reduced From 8.3 mg/l to 5.2 mg/l
  - Chlorine Cost is \$0.15 per lb
  - A. \$17,808
  - B. \$10,262
  - C. \$2,248
  - D. \$24,477
- 4. Which are typically considered acceptable applications for reuse water in Florida? (select all that apply) A. Surface Water Disposal
  - B. Golf Courses
  - C. Citrus Groves
  - D. Residential Irrigation
- 5. What is the main difference between a percolation pond (Pond) and a rapid infiltration basin (RIB)?
  - A. A Pond generally has an overflow discharge, and a RIB infiltrates all of its water into the ground through the bottom
  - B. A RIB generally has an overflow discharge0, and a Pond infiltrates all of its water through the bottom
  - C. Water infiltrates into a RIB and exfiltrates out of a Pond
  - D. No difference, they are both the same
- 6. What is the basic purpose for filtration of secondary effluent?
  - A. To make up for poor secondary treatment
  - B. To remove ammonia
  - C. To remove NO<sub>2</sub>
  - D. To remove TSS and viruses
- 7. What is the typical permit requirement for chlorine residual maintenance of reuse water as it leaves the Reclamation Facility in Florida?
  - A. No greater than 1.0 mg/l Total Chlorine Residual
  - B. No less than 0.5 mg/l Total Chlorine Residual
  - C. No greater than 1.0 mg/l Free Chlorine Residual
  - D. No less than 1.0 mg/l Total Chlorine Residual

- 8. What will a pressure gauge read on the suction of a reuse water pump, if the pump is located at floor elevation of a storage tank, and the tank has a static water level of 12 feet?
  - A. About 9.4 psi B. About 27.7 psi
  - C. About 12.0 psi
  - D. About 5.2 psi
- 9. What is the total delivered cost for eight (8) valves if one (1) valve costs \$537.99. The valves are shipped according to weight, with each valve weighing 104 lbs, at the rate of \$1.50 per lb?
  - A. \$4,303.92
  - B. \$5,551.92
  - C. \$1,249.00
  - D. \$6,551.92
- 10. What is the typical permit requirement for Total Suspended Solids (TSS) of reuse water as it leaves the Reclamation Facility in Florida?
  - A. No greater than 1.0 mg/l
  - B. No greater than 10.0 mg/l
  - C. No greater than 5.0 mg/l
  - D. No less than 12.0 mg/l

On behalf of the Operations Research Committee, Florida Water Environment Association, the questions were prepared and presented by:

Roy Pelletier, Assistant Bureau Chief City of Orlando Public Works Department Wastewater Process & Operations Bureau