

Operator Quiz Test No. 120 – Operation Questions

The following questions are designed for trainees as they prepare to take the ABC wastewater operator test. It is also designed for existing operators to test their knowledge. Each issue of *Clear Waters* will have more questions from a different section of wastewater treatment. Good luck!

- What is the name of the bacteria that converts nitrite to nitrate during the nitrification cycle?
 - Nitrobacter
 - Nitrosomonas
 - Nocardia
 - Thiothrix
- Determine the Total Suspended Solids given the following information:
Weight of crucible and filter – 22.2213 g
Weight of crucible, filter, and dry sample – 22.2310 g
Sample size – 5.0 mL
 - 9700 mg/L
 - 194.0 mg/L
 - 1940 mg/L
 - 4850 mg/L
- What is the chemical formula for sulfuric acid?
 - H₂SO₄
 - HCl
 - HNO₃
 - NaOH
- What would be considered a typical design detention time for a primary clarifier?
 - 4 hours
 - 30 minutes
 - 1.5 hours
 - 12 hours
- The appearance of duckweed in a final clarifier is an indication of:
 - Nitrification
 - Denitrification
 - Low pH
 - Low dissolved oxygen
- Anaerobic digesters should have a volatile acid to alkalinity ratio of:
 - 1:10
 - 1:2
 - 10:1
 - 2:1
- Determine the detention time of a circular clarifier given the following information:
Diameter = 50 feet
Depth of clarifier = 10 feet
Flow = 2 MGD
 - 1.75 hours
 - 5.52 hours
 - 2.35 hours
 - 9.81 hours
- Calculate the Chlorine Demand given the following information:
Feed rate = 150 lbs./day
Flow = 11.5 MGD
Chlorine residual = 0.5 mg/L
 - 1.06 mg/L
 - 1.56 mg/L
 - 2.06 mg/L
 - There is not enough information to determine the Chlorine Demand.
- Calculate the Biochemical Oxygen Demand for the following:
Initial dissolved oxygen – 8.3 mg/L
Final dissolved oxygen – 5.4 mg/L
Initial sample temperature – 12°C
Sample size – 20 mL
 - BOD cannot be determined
 - 43.5 mg/L
 - 12.8 mg/L
 - 75.9 mg/L
- A rotten egg smell in wastewater can most likely be attributed to:
 - Chlorine
 - Sulfur dioxide
 - Methane
 - Hydrogen sulfide

Answers from page 61: 1A, 2C, 3A, 4C, 5A, 6A, 7A, 8A, 9B, 10D

For those who have questions concerning operator certification requirements and scheduling, please contact Tanya May Jennings at 315-422-7811 ext. 4, tmj@nywea.org, or visit www.nywea.org/OpCert.