

Operator Quiz Test No. 114 – Activated Sludge, Etc.

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!

- Which of the following is not used to monitor and adjust the return activated sludge flow rate in a conventional activated sludge system?
 - MCRT
 - SVI approach
 - Settleability test
 - Clarifier sludge blanket indication
- Clouds of billowing sludge that occur throughout secondary clarifiers and sludge thickeners when the sludge does not settle properly are called:
 - Floater
 - Bulking
 - Blinding
 - Floc
- A good activated sludge composition will contain which of the following abundant protozoa:
 - Thiothrix and actinomycetes
 - Worms and nematodes
 - Rotifers and stalked ciliates
 - Filamentous bacteria and fecal coliform
- The term OUR can best be described as:
 - The amount of oxygen activated sludge uptakes at a specific rate
 - The amount of oxygen dissolved in wastewater
 - The amount of oxygen contained in an anaerobic digester
 - The amount of ozone needed to disinfect secondary effluent
- An aeration system is experiencing an increase in DO and an increase in floc over the secondary clarifier weirs resulting in higher than normal TSS in the effluent. The operator notices the blower output has remained constant. What can be the cause of this?:
 - An organic waste load
 - A toxic waste load
 - An inorganic waste load
 - A polymer leak making its way into the waste stream
- Of the following, the most precise piece of lab equipment for measuring liquid would be:
 - Beaker
 - Graduated cylinder
 - Erlenmeyer flask
 - Pipette
- How many gallons of a 15% sodium hypochlorite solution would be required to make up 115 gallons of 9% solution?:
 - 69 gallons
 - 192 gallons
 - 34 gallons
 - 155 gallons
- An anionic polymer will have:
 - A positive charge
 - A negative charge
 - A neutral charge
 - No charge
- Determine the hydraulic loading rate of a trickling filter using the following specifications:
6250 gpm flow rate
140' diameter
11.25 MGD
6' deep
 - 1585 MGD/ft²
 - 585 GPD/ft²
 - 975 GPM/ft²
 - 115 GPH/ft²
- What is the chemical formula for sulfuric acid?:
 - HCL
 - H₂SO₄
 - NaOH
 - HNO₃

Answers on page 62.

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.