



Certification Boulevard

Test Your Knowledge of Industrial Applications - Answer Key

1. What is a drainage well?
 - A. Structure that collects wastewater
 - B. Structure that controls floods**
 - C. Structure used for measuring rain data
 - D. Structure that dispenses reclaimed water

2. An ORP meter can be used to determine water quality ... what does "ORP" stand for?
 - A. Oxidation Regulating Potential
 - B. Oxidation Residual Process
 - C. Oxidation Reduction Potential**
 - D. Oxidation Receptor Process

3. What is the common preservation method for an Industrial Waste sample to be tested for CBOD₅?
 - A. Cool to 4°C**
 - B. Dechlorination
 - C. Acidification
 - D. Cool to 4°F

4. Heavy metals are considered a pollutant because of their:
 - A. Color
 - B. Appearance
 - C. Weight
 - D. Toxicity**

5. Given the following data, calculate the CBOD₅ in a sample of Industrial Wastewater:
 - Sample Volume = 3.5 ml
 - Initial D.O. = 6.8 mg/L
 - Final D.O. = 4.2 mg/L
 - A. 460 mg/L
 - B. 223 mg/L**
 - C. 345 mg/L
 - D. 587 mg/L

$$\begin{aligned} \text{CBOD}_5, \text{ mg/L} &= (\text{Initial D.O., mg/L} - \text{Final D.O., mg/L}) \div (\text{sample volume, ml} \div 300 \text{ ml}) \\ &= (6.8 - 4.2) \div (3.5 \text{ ml} \div 300 \text{ ml}) \\ &= 2.6 \div 0.01167 \\ &= 223 \text{ mg/L} \end{aligned}$$

6. An Industrial Waste facility has a TSS value of 1,560 mg/L entering its pre-treatment process, with a TSS value of 275 mg/L entering the sanitary sewer. Calculate the percent removal of TSS in the pre-treatment process.
- A. 29.3%
 - B. 60.7%
 - C. 25.5%
 - D. **82.4%**

$$\begin{aligned} \text{Percent TSS Removal} &= (\text{Inlet TSS, mg/L} - \text{Outlet TSS, mg/L}) \div \text{Inlet TSS, mg/L} \times 100 \\ &= (1,560 \text{ mg/L} - 275 \text{ mg/L}) \div 1,560 \text{ mg/L} \times 100 \\ &= 1,285 \div 1,560 = 0.8237 \times 100 \\ &= 82.4\% \end{aligned}$$

7. It is possible to test for Dissolved Oxygen in Industrial Wastewater using the Winkler method?
True or False

The Winkler method is used to test for Dissolved Oxygen

8. An Industrial facility has a confined space manhole with hazardous gas ... the vapor density of the hazardous gas present is 1.15 ... where is this gas more likely to be found?
- A. **Near the floor**
 - B. Equally distributed throughout the space
 - C. Near the ceiling
 - D. At this density, the gas will dissipate immediately
9. Which agency is responsible for overseeing the implementation of a Pretreatment Program?
- A. Health Department
 - B. **EPA**
 - C. Congress
 - D. IRS
10. What year was the Birth of the Clean Water Act?
- A. 1992
 - B. 1985
 - C. **1977**
 - D. 1899

Question No.2 was submitted by: John Ristau, "B" Operator for the City of Sebring
Question No.8 was submitted by Jon Meyer, Florida Water Services

Please forward your comments and sample questions for publication to:

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