



Certification Boulevard

Roy Pelletier



Test Your Knowledge of Industrial Applications

- What is a drainage well?
 - A structure that collects wastewater.
 - A structure that controls floods.
 - A structure used for measuring rain data.
 - A structure that dispenses reclaimed water.
- An ORP meter can be used to determine water quality. What does "ORP" stand for?
 - Oxidation Regulating Potential.
 - Oxidation Residual Process.
 - Oxidation Reduction Potential.
 - Oxidation Receptor Process.
- 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
- Heavy metals are considered a pollutant because of their:

A. Color	B. Appearance
C. Weight	D. Toxicity

- 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
- An industrial waste facility has a TSS value of 1,560 mg/L entering its pretreatment process, with a TSS value of 275 mg/L entering the sanitary sewer. Calculate the percent removal of TSS in this pre-treatment process.

A. 29.3%	B. 60.7%
C. 25.5%	D. 82.4%
- True or False:** It is not possible to test for dissolved oxygen in industrial wastewater using the Winkler method?
- An industrial facility has a confined space manhole with hazardous gas. The vapor density of the hazardous gas present is 0.85. Where is this gas more likely to be found?
 - Near the bottom of the space.
 - Equally distributed throughout the space.
 - Near the top of the space.
 - At this density, the gas will dissipate immediately.
- Which agency is responsible for overseeing the implementation of a pretreatment program?

A. Health Department	B. EPA
C. Congress	D. IRS
- What does the term "EPOC" mean?
 - Energy pollution of context.
 - Emerging pollutants of concern.
 - Every person of Canada.
 - Evaluate public opposition calmly.

ANSWERS ON PAGE XX

SEND US YOUR QUESTIONS FOR CERTIFICATION BOULEVARD

Do you have a question or an exercise you would like to feature in "Certification Boulevard?" We'll be glad to publish it. Just send your question (with the answer) or your exercise (with the solution) to:

Roy A. Pelletier
 Wastewater Consultant
 City of Orlando Public Works Department
 Environmental Services Wastewater Division
 5100 L.B. McLeod Road
 Orlando, Florida 32811
 roy.pelletier@cityoforlando.net
 Telephone 407-246-2213

There is no limit to the number of questions or exercises you may submit. Please include your name, city, and organization or company so we can give you credit.

Certification Boulevard Answer Key

From page xx

1. What is a drainage well?
B. A structure that controls floods
2. An ORP meter can be used to determine water quality ... what does "ORP" stand for?
C. Oxidation Reduction Potential
3. What is the common preservation method for an Industrial Waste sample to be tested for CBOD₅?
A. Cool to 4°C
4. Heavy metals are considered a pollutant because of their:
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/LB. 223 mg/L

$$\begin{aligned} \text{CBOD}_5, \text{ mg/L} &= (\text{Initial D.O., mg/L} - \text{Final D.O., mg/L}) \div \\ & \quad (\text{sample volume, ml} \div 300 \text{ m}) \\ &= (6.8 - 4.2) \div (3.5 \text{ ml} \div 300 \text{ m}) \\ &= 2.6 \div 0.0116 \\ &= 223 \text{ mg/L} \end{aligned}$$

6. An Industrial Waste facility has a TSS value of 1,560 mg/L entering its pretreatment process, with a TSS value of 275 mg/L entering the sanitary sewer. Calculate the percent removal of TSS in this pre-treatment process.
D. 82.4%

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

7. It is not possible to test for dissolved oxygen in industrial wastewater using the Winkler method.
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 0.85. Where is this gas more likely to be found?
C. Near the top of the space
9. Which agency is responsible for overseeing the implementation of a Pretreatment Program?
B. EPA
10. What does the term "EPOC" mean?
B. Emerging pollutants of concern