



Certification Boulevard

Test Your Knowledge of Disinfection

Multiple Choice

1. What is the expansion ratio of one volume of chlorine liquid when it evaporates to a gas?
 - A. 750
 - B. 8.34
 - C. 7.48
 - D. 460
2. Calculate the chlorine demand, given the following data:
 - Total daily pounds used is 1,400 lbs/day
 - The plant flow is 13.5 mgd
 - The effluent chlorine residual is 2.5 mg/l
 - A. 6,305 lbs/day
 - B. 1,118 lbs/day
 - C. 1,681 lbs/day
 - D. 281 lbs/day
3. What chemical is used to identify a chlorine leak?
 - A. Sulfur Dioxide
 - B. Sodium Hydroxide
 - C. Ammonia
 - D. Sulfuric Acid
4. What is the term most associated with free chlorine residual?
 - A. Breakpoint
 - B. Chloramine
 - C. Fecal
 - D. Alkalinity
5. Calculate the required capacity of a chlorine contact chamber, given the following data:
 - Plant average daily flow is 5.7 mgd
 - Plant peak flow is 9.9 mgd
 - Required detention time at ADF is 30 minutes
 - Required detention time at peak flow is 15 minutes
 - A. 13,721 cubic feet
 - B. 102,636 gallons
 - C. 12,367 cubic feet
 - D. 118,187 gallons
6. What does this formula best represent?

$$\frac{\text{Tank Volume, ft}^3}{\text{Flow, mgd} \times 92.4 \text{ cfm/mgd}}$$

- A. Chlorine residual
- B. Contact chamber detention time
- C. Fecal coliform
- D. Tank volume in gallons

True or False

7. Sulfur dioxide and sodium bisulfite can be used as dechlorination chemicals?
8. Never trap liquid chlorine between two closed valves.
9. Leaking chlorine gas will tend to collect near the ceiling of a closed room.

Matching

10. Match the following emergency repair kits to their respective containers:
- | | |
|-------|----------------------|
| Kit A | Tank cars and trucks |
| Kit B | 150 pound cylinders |
| Kit C | Ton containers |

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

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