

## CRTP Primary & Secondary Disinfection - Test Questions

Multiple choice - Answers are in **Bold Type**

1. What documents will you find information on Primary and Secondary Disinfection?
  - a. Documents in the municipal library
  - b. Document provided by Band office receptionist
  - c. Documents found in the Dictionary
  - d. **Protocol for Centralized Drinking Water and CBWQM Training Manual**
2. To learn more about primary and secondary disinfection, who can help water system operators increase their understanding of disinfection operations and maintenance?
  - a. Health Canada EHO
  - b. **INAC Circuit Rider Trainer**
  - c. Band Manager
  - d. Medical Centre Personnel
3. The multi-barrier approach is a strategy intended to prevent the presence of?
  - a. Petroleum in drinking water
  - b. Snakes in the clear well
  - c. **Water-borne contaminants in a drinking water supply.**
  - d. Utility service truck failure
4. What does MBA stand for in our discussion on protecting water supplies?
  - a. Microbiological Biochemical Association
  - b. Does not stand for anything
  - c. **Multiple Barrier Approach**
  - d. Miniscule Bumpers for Aston-Martin
5. The minimum level of treatment for drinking water is based on the type of raw water source; what are the two types of water source?
  - a. Clear and cloudy water
  - b. Colored and warm water
  - c. Hard and soft water
  - d. **Groundwater and Surface water**
6. Primary disinfection works together in sequence with the treatment process and?
  - a. **Is intended to kill or inactivate pathogenic organisms that may be present in the source water**
  - b. Is not intended to kill or inactivate pathogenic organisms that may be present in the source water
  - c. With not kill or inactivate pathogenic organisms that may be present in the source water
  - d. intended to activate pathogenic organisms that may be present in the source water
7. Secondary disinfection (distribution system disinfection) is intended to protect the distribution system from re-contamination by?
  - a. **The maintenance of a free residual of the disinfectant throughout the distribution system.**
  - b. Filling the distribution system to activate microorganisms that may enter the distribution system.
  - c. growth of microorganisms in the system to kill microorganisms that may enter the distribution system.
  - d. removing free residual of the disinfectant throughout the distribution system.

8. Distribution means a system of?
- water tankers on rail cars used to supply water for human consumption.
  - oil transmission mains, reservoirs, pumping stations, valves, and other appurtenance used to supply water for human consumption.
  - drums, tankers, bus stations, flutes, and other appurtenance used to supply water for human consumption.
  - water mains, reservoirs, pumping stations, valves, and other appurtenance used to supply water for human consumption.**
9. One of the four major components of the Multiple Barrier Approach (MBA) include treatment by disinfection; what is that component?
- Protection of water sources
  - Effective treatment of drinking water**
  - Maintenance of clean distribution systems
  - Comprehensive testing to confirm water quality
10. Chlorine and chlorine compounds are the \_\_\_\_\_ commonly used water disinfectant for secondary (residual) disinfection.
- Least
  - Favorite
  - Most**
  - Not so
11. Whose responsibility is it to operate and control equipment for secondary disinfection?
- Band manager
  - Consultants
  - Water system operators**
  - Atlantic Policy Congress Inc.
12. "Secondary Disinfection" is monitored by \_\_\_\_\_ when testing for maintenance of residual in the distribution?
- The FLQ
  - The Operator**
  - CSIS
  - Justin Trudeau
13. Primary and **Secondary** disinfection are?
- Not separate treatment processes designed to provide different outcomes
  - Separate treatment processes designed to provide different outcomes**
  - Separated treatment processes designed to provide the same outcomes
  - Separate treatment processes designed to provide outcomes
14. Any drinking water system that provides disinfected water for human consumption must?
- be equipped with adequate disinfection in case of emergency
  - be equipped with non-functional standby chlorination to ensure adequate disinfection in case of emergency
  - be equipped with working duty chlorination only to ensure adequate disinfection in case of emergency
  - be equipped with working standby chlorination to ensure adequate continuous disinfection in case of an emergency.**

15. All chemical additives used for water treatment must be certified to NSF/ANSI Standard 60: *Drinking Water Treatment Chemicals – Health Effects*. How can the operator check to ensure a chemical is safe for water treatment under this standard?
- The operator can read the product label or check the products MSDS provided by the supplier for Standard 25 certification
  - The operator can read the product label or check the products MSDS provided by the supplier for Standard 75 certification
  - The operator can read the product label or check the product MSDS provided by the supplier for Standard 60 certification**
  - The operator can read the product label or check the products MSDS provided by the supplier for Standard 100 certification
16. A **ground water** that supplies drinking water serving five or more households or one or more public facilities, the minimum required treatment is:
- Primary & Secondary Disinfection**
  - Just primary disinfection
  - Just secondary disinfection
  - Intermittent disinfection
17. Water systems providing **Secondary** disinfection must maintain a?
- chlorine residual of at least 0.0 mg/L or more of free chlorine in the distribution system
  - chlorine residual of at least 0.2 mg/L free chlorine in the distribution system**
  - chlorine residual of at least 10 mg/L or greater of free chlorine in the distribution system
  - chlorine residual of at least 0.05 mg/L or less of free chlorine in the distribution system
18. Surface water or a groundwater source under direct influence of surface water (GUDI), that supplies drinking water for human consumption to a distribution system serving five or more households or one or more public facilities, the minimum required treatment is?
- Filtration, Coagulation, Primary and Secondary Disinfection
  - Filtration, Primary, Secondary and Tertiary Disinfection
  - Filtration, Primary and Secondary Disinfection**
  - Filtration, Primary and Secondary Disinfection during the summer time
19. The water system designer should ensure that an appropriate contact time between the drinking water and disinfectant(s) is provided?
- to the water before it reaches the RCMP office in the distribution system.
  - to the water before it reaches the fire department in the distribution system.
  - to the trees before it reaches the first consumer in the distribution system.
  - to the water before it reaches the first consumer in the distribution system.**
20. The effectiveness of chlorination depends primarily on four factors:
- Concentration, Temperature and pH
  - Contact time, Concentration, Temperature and pH**
  - Contact time, Temperature, pH and part time help
  - Colour, Temperature, Hardness and pH
21. Operators can, by understanding what factors influences disinfection performance ensure that?
- an adequate disinfectant is added at the right concentration to complete primary and secondary disinfection.**
  - an inadequate disinfectant is added at weak concentrations for primary disinfection.
  - an adequate disinfectant is added at concentrations that fail primary and secondary disinfection.
  - disinfectant is added at below adequate concentration.