

SWS Sample Exam

1. The following can be used as indicators of bacterial contamination:
 - A. Algae
 - B. Total coliforms
 - C. Fungi
 - D. Virus
2. If a storage tank has been taken out of service for an extended length of time, which of the following is the last step an Operator needs to complete before putting the tank in service again?
 - A. Fill the tank
 - B. Disinfect the tank
 - C. Inspect the tank
 - D. Pain the tank
3. Which of the following should always be included on a sample container label?
 - A. The name or initials of the person running the analysis
 - B. The date, time, and location of the sample collection
 - C. The weather conditions when the sample was collected
 - D. The name and address of person taking the sample
4. A line has failed and 82.5 m of 200 mm in pipe must be replaced. How many 1.5 m sections of pipe will be needed?
 - A. 15 sections
 - B. 60 sections
 - C. 55 sections
 - D. 40 sections
5. Small water system operators who chlorinate their water supplies must test for:
 - A. Total chlorine residual
 - B. Total combined chlorine residual
 - C. Free available chlorine residual
 - D. Total chlorine dosage
6. A flow meter reads 5,678.6 m³ on one Monday, and 6,398.8 m³ on the following Monday. What is the average daily flow?
 - A. 51,500 L/day
 - B. 103,000 L/day
 - C. 183,000 L/day
 - D. 206,000 L/day

7. What should an Operator do when taking a sample for bacteriological analysis?
- A. Always rinse out the bottle with water before taking the sample
 - B. Let the water run for several minutes before filling the bottle, and cap it quickly after collecting the sample
 - C. Blow into the bottle to ensure there is no dust in the bottle
 - D. Take the sample at a bathroom sink whenever possible
8. A flow meter reads 5678.6 m³ on one Monday and 6398.9 m³ the next Monday. What is the average daily flow?
- A. 51,500 L/day
 - B. 72,000 L/day
 - C. 102,900 L/day
 - D. 206,000 L/day
9. Surface sealing a well means:
- A. Installing a sealant at the ground surface of the well
 - B. Building a concrete case around the well
 - C. Grading the ground so that the surface water runoff is away from the well
 - D. Installing a cap over the wellhead to prevent contamination from entering the well
10. What kind of sample should an Operator take for a chlorine residual?
- A. A 24 hour composite sample
 - B. A grab sample
 - C. A sample made up of 2 or 3 portions taken at the time of high flow
 - D. A sample taken at the time of low flow
11. Storage reservoirs in water systems are typically required for:
- A. Storage of hypochlorite for disinfection
 - B. Provide adequate water supply for fire fighting
 - C. Testing system components
 - D. None of the answers are correct
12. What is the most common method of inactivating pathogenic organisms:
- A. Disinfection
 - B. Liquidation
 - C. Pasteurization
 - D. Sterilization

13. How long will it take to fill an empty tank that is 6 m wide, 12 m long, and 4 m deep with a pump that delivers water at 15 L/second:
- A. 7.5 hours
 - B. 1.1 hours
 - C. 5.3 hours
 - D. 3.2 hours
14. What needs to be done to a tank to protect the water from contamination?
- A. It should be constructed below the ground surface
 - B. It should be provided with an air-tight seal
 - C. It should have cathodic protection
 - D. It should have screened vents and overflows
15. Turbidity refers to the ____ of the water
- A. Cloudiness
 - B. Odour
 - C. Pressure
 - D. Temperature
16. What is the volume of a 20 cm pipe that is 450 m long?
- A. 6,801 L
 - B. 9,425 L
 - C. 21,923 L
 - D. 14,143 L
17. What does the term 'head' mean in a pumping question?
- A. The pressure in terms of water column height
 - B. The depth of the water table after pumping
 - C. The discharge height of a pipe
 - D. The volume of water in a tank
18. An Operator receives complaints of stale water in a part of the system that is not looped. The temporary solution to this problem is to:
- A. Flush the pipes more often
 - B. Decrease the chlorine dose
 - C. Install mains to complete a loop
 - D. Remove hydrogen sulphide

19. Operators should not use water to extinguish fires involving electrical equipment as water:
- A. May damage hot insulators
 - B. May transmit electrical shock to the Operator
 - C. Will cause harmful steam
 - D. Will start a chemical reaction
20. What is indicated if the chlorine demand suddenly jumps from 1.0 mg/L to 3.0 mg/L in a well supply?
- A. More water is being pumped
 - B. Over chlorination
 - C. Possible contamination
 - D. Chlorine concentration is low
21. What are two of the most important safety concerns when entering a confined space?
- A. Lack of oxygen and presence of hazardous gases
 - B. Chlorine residual and turbidity
 - C. Bad odours and claustrophobia
 - D. Very high or very low temperatures
22. What is required to work in a trench that is 2 m deep?
- A. A video camera
 - B. Sloping or shoring
 - C. Placing the spoil pile close to the trench
 - D. A ladder for every three people
23. What is the most commonly used chemical for disinfection of water?
- A. Ozone
 - B. Ultraviolet light
 - C. Sodium hypochlorite
 - D. Potassium permanganate
24. An emergency response plan should include what specific information?
- A. Emergency contact phone numbers
 - B. An overall system map
 - C. Recovery operation information
 - D. All the answers are correct

25. The term 'air gap separation' means there is a:
- A. Gap in the air line to a supply tank
 - B. Physical break between the water supply line and a receiving vessel
 - C. The feed tank is full
 - D. Mechanical-type backflow prevention device

Answer Key

1. B
2. B
3. B
4. C
5. C
6. B
7. B
8. C
9. A
10. B
11. B
12. A
13. C
14. D
15. A
16. D
17. A
18. A
19. B
20. C
21. A
22. B
23. C
24. D
25. B