

SWWS Sample Exam

1. The activated sludge process is an example of which type of treatment?
 - A. Primary
 - B. Secondary
 - C. Tertiary
 - D. Advanced
2. Raw wastewater can contain:
 - A. Pathogens
 - B. Children's toys
 - C. Heavy metals
 - D. All of the above
3. BOD is the acronym for which of the following:
 - A. Biological oxygen demand
 - B. Biochemical oxygen demand
 - C. Bacteriological oxygen dissolved
 - D. Biochemical osmosis delivery
4. When organic wastes are discharged to receiving waters, the oxygen is depleted by:
 - A. Algae
 - B. Bacteria
 - C. Sea life
 - D. Limestone
5. Wastewater would be considered acidic if the pH was which of the following?
 - A. 9
 - B. 7
 - C. 3
 - D. None of the above
6. Motors in wastewater equipment can fail because of which of these causes?
 - A. Dirt
 - B. Moisture
 - C. Friction
 - D. All of the above
7. 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

8. Bacteriological samples are likely to be spoiled by:
- A. Shipping without adequate refrigeration
 - B. Allowing samples to come to room temperature
 - C. Touching the inside of the bottle or cap prior to sampling
 - D. All of the above
9. Which of the following devices are used for backflow prevention?
- A. Double check valve
 - B. Aeration basin
 - C. Centrifuge
 - D. Butterfly valve
10. Tricking filters and rotating biological contractors (RBC) stabilize wastewater by which action?
- A. Chemical
 - B. Biological
 - C. Filtering
 - D. Aerating
11. 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 of the above
12. Grease in sewer lines is most frequently removed by:
- A. Shovelling
 - B. Flushing
 - C. Digestion
 - D. Aeration
13. What is meant by the term 'combined sewers'?
- A. Industrial sewage and domestic sewage are collected in the same sewers
 - B. Storm water and sewage are collected in the same sewers
 - C. The main sewer line which takes all of a city's sewage to the treatment plant
 - D. A sewer which contains both gravity sewers and force mains
14. The two most common forms of wastewater disinfection are:
- A. UV and chlorine
 - B. UV and chloramine
 - C. Chlorine and ozonation
 - D. Chlorine and aeration

15. Which of the following is NOT a type of wastewater treatment lagoon?
- A. Aerobic
 - B. Facultative
 - C. Anaerobic
 - D. Septic
16. Most accidents in a treatment plant are caused by:
- A. Lack of an adequate safety program
 - B. Carelessness or negligence
 - C. Poor supervision
 - D. Unrecognized hazards
17. 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
18. Approximately how many litres of wastewater would 200 m of 20 cm pipe hold?
- A. 31,415 L
 - B. 80,000 L
 - C. 6,283 L
 - D. 10,531 L
19. Explain why treating wastewater is important
- Wastewater treatment is vital to the health of the environment and many different ecosystems. It is important for human health, and day to day life in our society.
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20. Every day the operator of a small wastewater treatment plant should first:
- A. Clean the settling basins and dispose of sludge
 - B. Ensure that all the plant equipment is operational
 - C. Replenish chemical stocks
 - D. Test start all standby pumps, motors and generators

21. Insufficient air supply will cause:
- A. Effluent quality to improve
 - B. Excessive turbulence to occur
 - C. Excessive foam to be creates
 - D. Turbidity in the final effluent
22. Wastewater should be pumped from a wet well or pump station:
- A. Once daily
 - B. Four times per day
 - C. Often enough to prevent wastewater from turning septic
 - D. For enough time to allow solids to settle
23. What is a good indication of quality activated sludge?
- A. Black colour and septic odour
 - B. Brown colour and musty odour
 - C. Brown colour with lots of dark brown foam
 - D. Settle ability of 900 mls in a liter cylinder in 30 minutes
24. What is the most common factor leading to the generation of hydrogen sulphide in wastewater collection pipes, structures, and treatment systems?
- A. Frequent high storm flows
 - B. Anaerobic conditions
 - C. High velocity of sewer flows
 - D. High levels of fats and oils
25. In order to ensure Operator safety, what should be done first when taking a pump out of service?
- A. Measure wastewater solids level
 - B. Drain and disinfect the pump
 - C. Lock-out and name tag the pump main breaker on 'Off'
 - D. Check voltage drop on pump

Answer Key

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