



Skagit County Public Health Pool Operator Test

1. **What parameter measures disinfection byproducts?**
 - a. free chlorine
 - b. pH
 - c. Cyanuric acid
 - d. combined chlorine
2. **Disinfection byproducts cause which of the following:**
 - a. Bather irritation
 - b. Cloudy water
 - c. Odors
 - d. All of the above
3. **Which chemistry parameters must be measured every day (circle all that apply)?**
 - a. Alkalinity
 - b. Free and total chlorine or bromine
 - c. Acid demand
 - d. pH
4. **What is the purpose of adding Cyanuric acid to an outdoor pool?**
 - a. To prevent UV light from the sun from lowering disinfectant levels
 - b. To balance pH
 - c. To kill algae
 - d. None; it is unnecessary in a pool
5. **Excess Cyanuric acid results in bather irritation and decreased chlorine disinfection. How do I lower the Cyanuric acid level in my pool?**
 - a. Dilute with fresh water
 - b. Use bicarbonate of soda
 - c. Shock the pool
 - d. Backwash the filter
6. **Limited purpose pools, such as hotel pools, do not always require:**
 - a. Depth markers
 - b. VGBA compliant drain covers
 - c. Daily monitoring
 - d. Life guards
7. **I must close my pool for use when (circle all that apply):**
 - a. The Health Inspector orders me to close
 - b. pH is below 7.2 or above 8.0
 - c. Free chlorine or total bromine is below 1.5 ppm or above 10.0 ppm
 - d. I cannot see the drains

- 8. If I close my pool due to insufficient free chlorine, prior to re-opening I must:**
- Shock the pool
 - Fill the feeder with chlorine tabs
 - Call a pool professional
 - Resolve the cause of the low chlorine and document that levels are within the required range
- 9. Total chlorine should never exceed?**
- free
 - 1.5 x free
 - pH
 - 10 ppm
- 10. What is the minimum water turnover rate required for pools?**
- 8 hrs
 - 6 hrs
 - 4 hrs
 - 2 hrs
- 11. If the pump malfunctions I should:**
- Call a repairman and allow users to keep swimming or exercising
 - Notify swimmers and allow them to decide whether or not to remain in the pool
 - Hand feed disinfectant in various part of the pool to make sure disinfectant levels remain adequate throughout the pool
 - Close the pool immediately and reopen when the pump is repaired
- 12. What is required when I close a pool (circle all that apply)?**
- Bathers are evacuated immediately
 - The entrances are locked
 - Signs are posted stating the pool and/or spa are closed
 - I don't reopen it until the problem is resolved
- 13. The pool test kit has instructions and chemicals to test Total Alkalinity, which is a measure of:**
- How stable the pH will be over time as acid is added
 - The equivalent to pH
 - The adequacy of the filtration system
 - How long the disinfectant will last
- 14. An adequate barrier for a water recreation facility is (circle all that apply):**
- High enough to keep small children out
 - A solid wall with a heavy steel gate and a ceiling or roof
 - Attractive and matches the décor of the facility
 - Is constructed out of non-climbable materials and at least 5' tall
- 15. The Virginia Graham Baker Act (VGBA) is designed to:**
- Prevent drowning and injury from entrapment in pools and spas
 - Improve water quality in pools and spas
 - Give local health jurisdictions more power over pools and spas
 - Require permits to operate pools and spas
- 16. Skimmer equalizer lines must have covers that meet VGBA**
- True
 - False

17. My simple test kit shows my disinfection level testing in most the intense pink range, equaling 5ppm free chlorine. I have an accurate measurement of chlorine in my pool.

- a. True
- b. False

18. Based on the previous question I will:

- a. Record the chlorine level as 5 ppm
- b. Dilute 1:1 with tap water and multiply the results by 2
- c. Dilute my pool sample proportionally (1:1 or 1:4) with distilled water until I get an endpoint within the light pink range of the colorimetric scale. Multiply my result by the proportion of my dilution (x2, or x5, etc.)
- d. Re-do the test with half the amount of phenol red

19. There is an accidental fecal release (solid form) in the pool. I need to (circle all that apply):

- a. Find out who made the release
- b. Remove the feces
- c. Close the pool , increase the free chlorine level by 2ppm, maintain pH at 7.5 or less, keep temperature at 77° or higher for 20minutes
- d. Close the pool, raise the free chlorine to 20ppm, maintain pH at 7.5 or less, keep temperature at 77° or higher for 12.75 hours
- e. Close the pool, collect the feces and re-open after 15 minutes

20. I should back-flush a sand filter when?

- a. The pressure gauge on the filter reads 10 psi over clean filter levels
- b. Weekly
- c. Monthly
- d. When the pressure gauge on the filter inlet reads 20 psi

21. On a hot day when I know I will have heavy pool or spa use I will:

- a. Increase the chlorine level and check it the next morning
- b. Monitor the chlorine levels and adjust levels as needed
- c. Place a couple of chlorine pucks in the skimmers
- d. Add chlorine as needed directly to the pool in an area away from bathers

22. When should the main drain cover be replaced (circle all that apply)?

- a. When loose
- b. When cracked or damaged
- c. When gaps of over ½ inch are noticed
- d. When manufacturers service life is reached

23. I check my pool and cannot see my main drain(s) from the deck of the pool. What should I do first?

- a. Close the pool
- b. Change/clean the filters and monitor the pool for improvement
- c. Monitor the bathers and work on the issue after the pool closes for the day
- d. Limit bathers to shallower areas of the pool

24. A rectangular pool is 20 feet by 8 feet. It is 2 feet at the shallow end and 6 feet at the deepest end of the pool. How many gallons of water are in the pool?

- a. 500 gallons
- b. 3200 gallons
- c. 4800 gallons
- d. 7500 gallons

25. My pool is 50 feet by 25 feet and averages 5 feet deep; my flow rate should be at least ____ to achieve my required turnaround time?

- a. 130 gpm
- b. 375,000 gallons
- c. 87 gpm
- d. 345 lpm

26. Every day the pool is open for use I must measure and record (circle all that apply):

- a. pH
- b. pool depth
- c. combined chlorine
- d. bacteria levels
- e. free chlorine

27. Written documentation of chemical values, maintenance, accident, and injury reports must be available for inspector review and kept for:

- a. 3 months
- b. 1 year
- c. 3 years
- d. 5 years

28. The barrier around the pool must be secure:

- a. To keep out animals and garbage
- b. To keep out unauthorized users
- c. So children don't leave the pool area
- d. Because the inspectors like them

29. Most pool illnesses result from

- a. Not enough chlorine
- b. Too much chlorine
- c. Pool water too cold
- d. Poor turnover rates

30. Which of the following must be reported to the health department (circle all that apply)?

- a. Fecal accidents
- b. Low pH
- c. Serious bather injuries or drowning
- d. Bather illness complaints
- e. Bather rash complaints

I certify the I have reviewed the information in the Pool Operator Training provided by Skagit County Public Health Department and answered the above questions to the best of my ability.

Operator signature

Date

Operator name (print) _____

Pool or spa facility _____

Address of facility _____

Score: _____