

PRACTICE EXAM 28: PUBLIC HEALTH SANITARIAN TRAINEE SIMULATION (100 QUESTIONS)

This practice exam contains 100 multiple-choice questions with one best answer for each question. For a realistic session, allow three hours. The New York State study guide identifies Arithmetic Reasoning; Understanding and Interpreting Written Material; and Principles of Biology, Chemistry, and General Science as the tested subject areas. Local examination announcements control administration, scoring, and eligibility details.

1. A trainee reviews 752 inspection entries over 8 equal workdays. What is the average number reviewed per day?

- A. 106 entries
- B. 94 entries
- C. 752 entries
- D. 85 entries

2. A review queue contains 460 samples. If 20% require a second review, how many samples require that review?

- A. 99 samples
- B. 368 samples
- C. 552 samples
- D. 92 samples

3. A storage area holds 420 containers. After 20% are transferred for testing, how many containers remain?

- A. 504 containers
- B. 84 containers
- C. 336 containers
- D. 345 containers

4. A field team processes 300 forms from 10 equal sites. What is the average number of forms per site?

- A. 30 forms
- B. 300 forms
- C. 40 forms
- D. 26 forms

5. A sampling team labels 162 bottles at a steady rate of 27 bottles per hour. How many hours are needed?

- A. 8 hours
- B. 162 hours
- C. 33 hours
- D. 6 hours

6. A rectangular sampling pad is 13 meters long and 9 meters wide. What is its area?

- A. 22 square meters
- B. 44 square meters
- C. 117 square meters
- D. 130 square meters

7. A rectangular inspection area is 19 meters long and 8 meters wide. What is its perimeter?

- A. 54 meters
- B. 152 meters
- C. 27 meters
- D. 304 meters

8. A rectangular tank section measures 5 meters by 3 meters by 5 meters. What is its volume?

- A. 15 cubic meters
- B. 75 cubic meters
- C. 26 cubic meters
- D. 80 cubic meters

9. Using the stated relationship of 4 quarts per gallon, how many quarts are in 9 gallons?

- A. 36 quarts
- B. 13 quarts
- C. 18 quarts
- D. 40 quarts

10. A container holds 182 milligrams of a dissolved substance in 7 liters of solution. What is the concentration?

- A. 28 milligrams per liter
- B. 182 milligrams per liter
- C. 33 milligrams per liter
- D. 26 milligrams per liter

11. Two sites submit 19 and 27 samples. If 7 samples are rejected as duplicates, how many usable samples remain?

- A. 53 samples
- B. 46 samples
- C. 39 samples
- D. 20 samples

12. A laboratory receives 160 samples in one period and 20% more in the next period. How many samples arrive in the next period?

- A. 128 samples
- B. 192 samples
- C. 32 samples
- D. 180 samples

13. Two equal groups produce readings of 77 and 89. What is their combined average?

- A. 41.5 units
- B. 166 units
- C. 12 units
- D. 83 units

14. A batch contains 84 items. If $\frac{4}{7}$ of them are inspected first, how many items is that?

- A. 41 items
- B. 48 items
- C. 132 items
- D. 11 items

15. If 6 equal sites need 60 labels, how many labels are needed for 9 sites at the same rate?

- A. 19 labels
- B. 60 labels
- C. 90 labels
- D. 80 labels

16. A trainee reviews 736 inspection entries over 8 equal workdays. What is the average number reviewed per day?

- A. 92 entries
- B. 104 entries
- C. 736 entries
- D. 83 entries

17. A review queue contains 420 samples. If 15% require a second review, how many samples require that review?

- A. 483 samples
- B. 357 samples
- C. 63 samples
- D. 70 samples

18. A storage area holds 380 containers. After 20% are transferred for testing, how many containers remain?

- A. 304 containers
- B. 76 containers
- C. 456 containers
- D. 313 containers

19. A field team processes 352 forms from 11 equal sites. What is the average number of forms per site?

- A. 28 forms
- B. 352 forms
- C. 43 forms
- D. 32 forms

20. A sampling team labels 108 bottles at a steady rate of 18 bottles per hour. How many hours are needed?

- A. 108 hours
- B. 6 hours
- C. 24 hours
- D. 8 hours

21. A rectangular sampling pad is 17 meters long and 8 meters wide. What is its area?

- A. 50 square meters
- B. 136 square meters
- C. 25 square meters
- D. 153 square meters

22. A rectangular inspection area is 14 meters long and 9 meters wide. What is its perimeter?

- A. 23 meters
- B. 126 meters
- C. 46 meters
- D. 252 meters

23. A rectangular tank section measures 5 meters by 6 meters by 8 meters. What is its volume?

- A. 240 cubic meters
- B. 30 cubic meters
- C. 38 cubic meters
- D. 248 cubic meters

24. Using the stated relationship of 4 quarts per gallon, how many quarts are in 15 gallons?

- A. 64 quarts
- B. 19 quarts
- C. 30 quarts
- D. 60 quarts

25. A container holds 208 milligrams of a dissolved substance in 8 liters of solution. What is the concentration?

- A. 208 milligrams per liter
- B. 26 milligrams per liter
- C. 34 milligrams per liter
- D. 28 milligrams per liter

26. Two sites submit 22 and 31 samples. If 7 samples are rejected as duplicates, how many usable samples remain?

- A. 46 samples
- B. 53 samples
- C. 60 samples
- D. 24 samples

27. A laboratory receives 130 samples in one period and 20% more in the next period. How many samples arrive in the next period?

- A. 150 samples
- B. 104 samples
- C. 26 samples
- D. 156 samples

28. Two equal groups produce readings of 76 and 76. What is their combined average?

- A. 0 units
- B. 152 units
- C. 76 units
- D. 38 units

29. A batch contains 78 items. If $\frac{3}{6}$ of them are inspected first, how many items is that?

- A. 44 items
- B. 39 items
- C. 117 items
- D. 9 items

30. If 9 equal sites need 81 labels, how many labels are needed for 12 sites at the same rate?

- A. 21 labels
- B. 81 labels
- C. 108 labels
- D. 99 labels

31. A trainee reviews 720 inspection entries over 8 equal workdays. What is the average number reviewed per day?

- A. 90 entries
- B. 102 entries
- C. 720 entries
- D. 81 entries

32. A review queue contains 380 samples. If 10% require a second review, how many samples require that review?

- A. 45 samples
- B. 342 samples
- C. 418 samples
- D. 38 samples

33. A storage area holds 340 containers. After 20% are transferred for testing, how many containers remain?

- A. 272 containers
- B. 68 containers
- C. 408 containers
- D. 281 containers

34. A field team processes 408 forms from 12 equal sites. What is the average number of forms per site?

- A. 46 forms
- B. 408 forms
- C. 34 forms
- D. 30 forms

35. A sampling team labels 126 bottles at a steady rate of 21 bottles per hour. How many hours are needed?

- A. 8 hours
- B. 126 hours
- C. 27 hours
- D. 6 hours

36. In a practice inspection note for Exam 28, a facility plan shows raw water entering a screen, then a settling basin, then a filter. The plan gives no information about disinfection. Which statement is supported?

- A. go beyond the information provided
- B. The plan places settling after screening.
- C. treat an unstated detail as established
- D. confuse a request or observation with a completed result

37. In a practice inspection note for Exam 28: An inspection note says a door was propped open during the visit, but it does not say how long the door had been open. Which statement is most accurate?

- A. go beyond the information provided
- B. The door was open when observed.
- C. treat an unstated detail as established
- D. confuse a request or observation with a completed result

38. In a practice inspection note for Exam 28, a report compares three storage rooms by temperature readings and identifies Room B as warmest. It does not compare cleanliness. What is the best conclusion?

- A. treat an unstated detail as established
- B. go beyond the information provided
- C. Room B had the highest recorded temperature.
- D. confuse a request or observation with a completed result

39. In a practice inspection note for Exam 28, a trainee reads that a spill was isolated, the area was marked, and cleanup supplies were requested. Which action is described as occurring after isolation?

- A. confuse a request or observation with a completed result
- B. go beyond the information provided
- C. treat an unstated detail as established
- D. The area was marked and supplies were requested.

40. In a practice inspection note for Exam 28, a monitoring summary reports fewer complaints after a drain was repaired, but it does not say the repair caused the change. What is supported?

- A. Complaints decreased after the repair.
- B. go beyond the information provided
- C. treat an unstated detail as established
- D. confuse a request or observation with a completed result

41. In a practice inspection note for Exam 28, a checklist marks handwashing supplies present and soap dispensers filled. It leaves the frequency of handwashing blank. What follows?

- A. treat an unstated detail as established
- B. go beyond the information provided
- C. Supplies were present and dispensers were filled.
- D. confuse a request or observation with a completed result

42. In a practice inspection note for Exam 28, a work order requests replacement of a cracked sample rack. The order does not say whether any samples were damaged. Which conclusion is supported?

- A. confuse a request or observation with a completed result
- B. go beyond the information provided
- C. treat an unstated detail as established
- D. A cracked rack was identified for replacement.

43. In a practice inspection note for Exam 28, a route sheet lists four stops, with the second stop crossed out and initialed. No reason is written. What is the safest interpretation?

- A. go beyond the information provided
- B. The second stop was crossed out and initialed.
- C. treat an unstated detail as established
- D. confuse a request or observation with a completed result

44. In a practice inspection note for Exam 28, a laboratory message says a result is pending and asks the sender to verify the sample number. What should the reader conclude?

- A. The result is not yet reported.
- B. go beyond the information provided
- C. treat an unstated detail as established
- D. confuse a request or observation with a completed result

45. In a practice inspection note for Exam 28: An inspection narrative states that a vent fan was running, but the narrative does not measure airflow. Which conclusion is justified?

- A. The fan was running at the time of observation.
- B. go beyond the information provided
- C. treat an unstated detail as established
- D. confuse a request or observation with a completed result

46. In a practice inspection note for Exam 28, a chart shows daily readings of 4, 5, 5, and 7. Which feature is directly supported?

- A. treat an unstated detail as established
- B. go beyond the information provided
- C. The highest reading was 7.
- D. confuse a request or observation with a completed result

47. In a practice inspection note for Exam 28, a complaint describes an odor near a loading dock and gives the time of day. It does not identify a source. What should be recorded as established?

- A. go beyond the information provided
- B. An odor was reported near the dock at the stated time.
- C. treat an unstated detail as established
- D. confuse a request or observation with a completed result

48. In a practice inspection note for Exam 28, a procedure says to label the container before placing it in the cooler. Which step should precede cooling?

- A. confuse a request or observation with a completed result
- B. go beyond the information provided
- C. treat an unstated detail as established
- D. Label the container.

49. In a practice inspection note for Exam 28, a summary states that two readings were above the site's usual range, but it does not provide the range itself. What can be concluded?

- A. confuse a request or observation with a completed result
- B. go beyond the information provided
- C. treat an unstated detail as established
- D. Two readings were described as above the usual range.

50. In a practice inspection note for Exam 28, a facility map marks a valve near the sampling point but does not say whether it is open. Which conclusion is supported?

- A. A valve is located near the sampling point.
- B. go beyond the information provided
- C. treat an unstated detail as established
- D. confuse a request or observation with a completed result

51. In a practice inspection note for Exam 28, a trainee records that a container was intact, sealed, and labeled when received. The note does not describe transport time. What is supported?

- A. treat an unstated detail as established
- B. go beyond the information provided
- C. The container's condition and label were checked on receipt.
- D. confuse a request or observation with a completed result

52. In a practice inspection note for Exam 28, a notice asks staff to keep a walkway clear while equipment is moved. Which purpose is stated?

- A. go beyond the information provided
- B. Keep the walkway clear during the move.
- C. treat an unstated detail as established
- D. confuse a request or observation with a completed result

53. In a practice inspection note for Exam 28, a table lists three sites and the number of corrective actions at each. Site C has the fewest. What is supported?

- A. go beyond the information provided
- B. Site C has the fewest listed corrective actions.
- C. treat an unstated detail as established
- D. confuse a request or observation with a completed result

54. In a practice inspection note for Exam 28, a note says a faucet was repaired and a follow-up inspection was scheduled. Which event is presented as later?

- A. The follow-up inspection.
- B. go beyond the information provided
- C. treat an unstated detail as established
- D. confuse a request or observation with a completed result

55. In a practice inspection note for Exam 28, a report says the inspector could not enter a locked room and therefore did not evaluate its equipment. What follows?

- A. treat an unstated detail as established
- B. go beyond the information provided
- C. The equipment in that room was not evaluated.
- D. confuse a request or observation with a completed result

56. In a practice inspection note for Exam 28, a training memo defines a response as immediate when it begins during the same work period. A trainee begins during that period. How should it be classified?

- A. confuse a request or observation with a completed result
- B. go beyond the information provided
- C. treat an unstated detail as established
- D. Immediate.

57. In a practice inspection note for Exam 28, a weekly summary says reports were received on Monday and Wednesday, with no reports on Tuesday. What is directly stated?

- A. treat an unstated detail as established
- B. go beyond the information provided
- C. No report was recorded on Tuesday.
- D. confuse a request or observation with a completed result

58. In a practice inspection note for Exam 28, a field note says the inspector observed a covered waste bin, a clean floor, and no evidence of leakage. The note does not discuss employee training. Which conclusion is supported?

- A. confuse a request or observation with a completed result
- B. go beyond the information provided
- C. treat an unstated detail as established
- D. The bin and floor were observed in acceptable condition.

59. In a practice inspection note for Exam 28, a sample log lists collection time, collector initials, container number, and cooler temperature. It does not state the laboratory result. What can be concluded?

- A. go beyond the information provided
- B. The log documents collection details.
- C. treat an unstated detail as established
- D. confuse a request or observation with a completed result

60. In a practice inspection note for Exam 28, a supervisor asks a trainee to inspect a drain, record the condition, and report any blockage before the end of the shift. Which action is required first?

- A. Inspect the drain and record what is observed.
- B. go beyond the information provided
- C. treat an unstated detail as established
- D. confuse a request or observation with a completed result

61. During practice set 28, what is the safest interpretation of a single unusual reading?

- A. Treat it as a signal to verify conditions and review the method
- B. Assume the entire system failed
- C. Delete the reading
- D. Declare the cause without investigation

62. In a sanitarian field scenario labeled 28, which action best protects a worker before entering a potentially hazardous area?

- A. Enter quickly without checking
- B. Identify hazards and follow the required entry and protective procedures
- C. Rely only on odor
- D. Assume an empty area is safe

63. For a facility scenario in Exam 28, what is a pathogen?

- A. A sampling schedule
- B. Any harmless mineral
- C. An infectious agent capable of causing disease
- D. A type of pipe fitting

64. During practice set 28, why should a cracked sample bottle generally be rejected?

- A. It increases chain-of-custody accuracy
- B. It always improves representativeness
- C. It sterilizes the sample
- D. Its integrity and ability to contain the sample are uncertain

65. In a sanitarian field scenario labeled 28, what is the main role of a settling basin after screening?

- A. Provide time for suspended particles to settle
- B. Add labels to samples
- C. Create airflow for workers
- D. Measure pH without an instrument

66. For a facility scenario in Exam 28, which statement about chlorine and organic material is most accurate?

- A. Chlorine removes every dissolved compound
- B. Organic material always creates sterile water
- C. Organic material can consume some disinfectant demand
- D. Organic material has no effect on treatment

67. During practice set 28, why is a representative sample important?

- A. It should hide variation
- B. It should be chosen for convenience only
- C. It should be the cleanest possible sample
- D. It should reflect the condition the investigation is intended to evaluate

68. In a sanitarian field scenario labeled 28, what is a hazard in an environmental-health context?

- A. A completed answer key
- B. A condition or agent with potential to cause harm
- C. A routine page number
- D. A clean empty shelf

69. For a facility scenario in Exam 28, why are corrective actions documented after an inspection?

- A. To identify what needs to be addressed and support follow-up
- B. To erase the original observation
- C. To guarantee no recurrence
- D. To replace all evidence

70. During practice set 28, which condition most directly suggests a possible sanitation concern?

- A. A labeled dry form
- B. A sealed clean drinking cup
- C. A leaking sewage line near an accessible public area
- D. A closed cabinet with no leak

71. In a sanitarian field scenario labeled 28, what does calibration compare?

- A. A pipe with a map
- B. A sample with a random guess
- C. A worker with a schedule
- D. An instrument's response with a known reference or standard

72. For a facility scenario in Exam 28, why is hand hygiene considered an important infection-control measure?

- A. It can reduce transfer of microorganisms from hands to people or surfaces
- B. It removes every hazard from a facility
- C. It replaces cleaning of equipment
- D. It guarantees that illness cannot occur

73. During practice set 28, which treatment step is primarily intended to remove settleable solids by gravity?

- A. Aeration
- B. Sedimentation
- C. Disinfection
- D. Chlorination

74. In a sanitarian field scenario labeled 28, why can high turbidity interfere with disinfection?

- A. Particles turn disinfectant into oxygen
- B. Turbidity always increases contact time
- C. Particles can shield microorganisms from the disinfectant
- D. Turbidity guarantees sterility

75. For a facility scenario in Exam 28, what is the main purpose of screening at the head of a wastewater process?

- A. Increase pathogen growth
- B. Create a vaccine
- C. Measure dissolved oxygen only
- D. Remove large debris

76. During practice set 28, which statement best describes activated sludge treatment?

- A. Only sunlight removes all solids
- B. Microorganisms use aerated conditions to help break down organic matter
- C. A filter adds organic matter
- D. A pipe stores wastewater without treatment

77. In a sanitarian field scenario labeled 28, what does a chain-of-custody record primarily support?

- A. Elimination of all contamination risk
- B. A guarantee that every result is correct
- C. Replacement of sample labels
- D. Traceability of a sample from collection through transfer

78. For a facility scenario in Exam 28, what is a cross-connection in a water system?

- A. A connection that can allow unwanted flow between separate systems
- B. A routine pressure reading
- C. A sealed sample bottle
- D. A type of settling basin

79. During practice set 28, what is the purpose of backflow prevention?

- A. Remove all minerals from water
- B. Increase sewage solids
- C. Reduce the chance that contaminated water moves into a potable supply
- D. Replace laboratory analysis

80. In a sanitarian field scenario labeled 28, which sequence best represents a basic source-pathway-receptor analysis?

- A. Name a symptom, skip the route, and close the file
- B. Identify the source, the route, and the exposed person or population
- C. Measure color only and infer exposure
- D. List equipment without identifying a hazard

81. For a facility scenario in Exam 28, why is a sterile sample container used for microbiological testing?

- A. To sterilize the source water
- B. To increase turbidity
- C. To reduce contamination introduced during collection
- D. To replace refrigeration

82. During practice set 28, what is the role of dissolved oxygen in an aerobic biological process?

- A. It converts all water to vapor
- B. It prevents every chemical reaction
- C. It is the same as suspended solids
- D. It supports microorganisms that use oxygen while metabolizing biodegradable material

83. In a sanitarian field scenario labeled 28, which observation is most useful for recognizing a possible vector harborage area?

- A. A sealed clean container
- B. Standing water and accumulated organic debris
- C. A dry labeled clipboard
- D. A closed laboratory refrigerator

84. For a facility scenario in Exam 28, what does pH describe?

- A. The acidity or alkalinity of a solution
- B. The number of samples in a cooler
- C. The mass of a filter
- D. The speed of a pump

85. During practice set 28, what does a disinfectant residual indicate most directly?

- A. The pipe is physically clean
- B. All pathogens have been removed
- C. The water contains no minerals
- D. Disinfectant remains available in the water at the point measured

86. In a sanitarian field scenario labeled 28, why should a sample be labeled at collection?

- A. To connect the container to the correct location, time, and sample record
- B. To change the sample chemistry
- C. To increase sample volume
- D. To avoid documenting the collector

87. For a facility scenario in Exam 28, which change would generally increase the settling time needed for a particle?

- A. A larger sample number
- B. A clearer label
- C. A smaller particle size
- D. A shorter container lid

88. During practice set 28, what does a filter primarily remove from water?

- A. Every dissolved chemical
- B. Particles retained by the filter medium
- C. All heat
- D. The source of contamination itself

89. In a sanitarian field scenario labeled 28, why is ventilation important when a process may release irritating vapors?

- A. It increases vapor concentration
- B. It guarantees no exposure
- C. It replaces protective equipment in every case
- D. It can reduce accumulation of airborne contaminants

90. For a facility scenario in Exam 28, what is the main purpose of personal protective equipment?

- A. Provide a barrier between the worker and a hazard
- B. Remove the hazard at its source
- C. Prove the facility is compliant
- D. Replace all training

91. During practice set 28, which laboratory practice reduces carryover between samples?

- A. Removing labels before testing
- B. Using the same dirty pipette for every sample
- C. Using clean equipment and changing or decontaminating tools as required
- D. Leaving containers open

92. In a sanitarian field scenario labeled 28, what is biodegradation in wastewater treatment?

- A. Microbial breakdown of biodegradable material
- B. Physical crushing of all solids
- C. Evaporation of every contaminant
- D. A change in label color

93. For a facility scenario in Exam 28, why is a control sample included in some testing programs?

- A. To guarantee the field sample is safe
- B. To help identify problems with the testing process or background contamination
- C. To replace every field sample
- D. To increase the analyte concentration

94. During practice set 28, what does a grab sample represent most directly?

- A. Only the laboratory's opinion
- B. Every condition for an entire year
- C. Conditions at a particular place and time
- D. A guaranteed average of all flows

95. In a sanitarian field scenario labeled 28, what is the principal concern when clean equipment contacts a dirty surface before sampling?

- A. The equipment gains a known calibration
- B. The sample becomes automatically sterile
- C. The sample label becomes more accurate
- D. The equipment may transfer contamination into the sample

96. For a facility scenario in Exam 28, which factor is most important when preserving a time-sensitive sample?

- A. Leaving the container unsealed
- B. Following the specified holding and transport conditions
- C. Changing the sample location after collection
- D. Removing the collection time

97. During practice set 28, what is a biofilm?

- A. A measurement unit
- B. A single free-floating mineral
- C. A clean glass container
- D. A community of microorganisms attached to a surface within a matrix

98. In a sanitarian field scenario labeled 28, why can stagnant water be a concern in a distribution system?

- A. It can allow conditions to differ from normally flowing water
- B. It always removes disinfectant
- C. It guarantees no microbial activity
- D. It converts every dissolved solid to gas

99. For a facility scenario in Exam 28, which property is measured by a thermometer?

- A. Turbidity
- B. pH
- C. Temperature
- D. Conductivity

100. During practice set 28, what does turbidity describe?

- A. The acidity of water
- B. The cloudiness caused by suspended material
- C. The number of bacteria counted
- D. The pressure in a pipe

Answer Key and Explanations

1. B — The correct choice is B because total divided by workdays gives $752 / 8 = 94$. Other choices use a different operation or amount. The units are entries per day, so the result answers the question. Keeping the units visible helps confirm that the calculation measures the records assigned to each workday.

2. D — The correct choice is D because 20% multiplied by the queue gives $0.2 \times 460 = 92$. Other choices use a different operation or amount. The units are samples, so the result answers the question. Keeping the units visible helps confirm that the calculation measures the portion selected for follow-up.

3. C — The correct choice is C because the original amount minus the transferred amount gives $420 - 84 = 336$. Other choices use a different operation or amount. The units are containers, so the result answers the question. Keeping the units visible helps confirm that the calculation measures the amount left after the stated reduction.

4. A — The correct choice is A because total forms divided by sites gives $300 / 10 = 30$. Other choices use a different operation or amount. The units are forms per site, so the result answers the question. Keeping the units visible helps confirm that the calculation measures the workload assigned to one site.

5. D — The correct choice is D because total bottles divided by bottles per hour gives $162 / 27 = 6$. Other choices use a different operation or amount. The units are hours, so the result answers the question. Keeping the units visible helps confirm that the calculation measures the time needed at the stated rate.

6. C — The correct choice is C because length multiplied by width gives $13 \times 9 = 117$. Other choices use a different operation or amount. The units are square meters, so the result answers the question. Keeping the units visible helps confirm that the calculation measures the surface covered by the pad.

7. A — The correct choice is A because twice the sum of length and width gives $2 \times (19 + 8) = 54$. Other choices use a different operation or amount. The units are meters, so the result answers the question. Keeping the units visible helps confirm that the calculation measures the distance around the inspection area.

8. B — The correct choice is B because length multiplied by width and height gives $5 \times 3 \times 5 = 75$. Other choices use a different operation or amount. The units are cubic meters, so the result answers the question. Keeping the units visible helps confirm that the calculation measures the space inside the tank section.

9. A — The correct choice is A because gallons multiplied by quarts per gallon gives $9 \times 4 = 36$. Other choices use a different operation or amount. The units are quarts, so the result answers the question. Keeping the units visible helps confirm that the calculation measures the converted volume. This check supports the stated units.

10. D — The correct choice is D because total milligrams divided by liters gives $182 / 7 = 26$. Other choices use a different operation or amount. The units are milligrams per liter, so the result answers the question. Keeping the units visible helps confirm that the calculation measures the amount in one liter.

11. C — The correct choice is C because the two submissions minus duplicates gives $19 + 27 - 7 = 39$. Other choices use a different operation or amount. The units are usable samples, so the result answers the question. Keeping the units visible helps confirm that the calculation measures the count after removing duplicates.

12. B — The correct choice is B because the original count plus its percentage increase gives $160 + 32 = 192$. Other choices use a different operation or amount. The units are samples, so the result answers the question. Keeping the units visible helps confirm that the calculation measures the new total after the increase.

13. D — The correct choice is D because the sum of equal-weight readings divided by two gives $(77 + 89) / 2 = 83$. Other choices use a different operation or amount. The units are units, so the result answers the question. Keeping the units visible helps confirm that the calculation measures the average of the two equal groups.

14. B — The correct choice is B because the stated fraction multiplied by the batch gives $(4/7) \times 84 = 48$. Other choices use a different operation or amount. The units are items, so the result answers the question. Keeping the units visible helps confirm that the calculation measures the portion inspected first.

15. C — The correct choice is C because sites multiplied by labels per site gives $9 \times 10 = 90$. Other choices use a different operation or amount. The units are labels, so the result answers the question. Keeping the units visible helps confirm that the calculation measures the label requirement at a constant rate.

16. A — The correct choice is A because total divided by workdays gives $736 / 8 = 92$. Other choices use a different operation or amount. The units are entries per day, so the result answers the question. Keeping the units visible helps confirm that the calculation measures the records assigned to each workday.

17. C — The correct choice is C because 15% multiplied by the queue gives $0.15 \times 420 = 63$. Other choices use a different operation or amount. The units are samples, so the result answers the question. Keeping the units visible helps confirm that the calculation measures the portion selected for follow-up.

18. A — The correct choice is A because the original amount minus the transferred amount gives $380 - 76 = 304$. Other choices use a different operation or amount. The units are containers, so the result answers the question. Keeping the units visible helps confirm that the calculation measures the amount left after the stated reduction.

19. D — The correct choice is D because total forms divided by sites gives $352 / 11 = 32$. Other choices use a different operation or amount. The units are forms per site, so the result answers the question. Keeping the units visible helps confirm that the calculation measures the workload assigned to one site.

20. B — The correct choice is B because total bottles divided by bottles per hour gives $108 / 18 = 6$. Other choices use a different operation or amount. The units are hours, so the result answers the question. Keeping the units visible helps confirm that the calculation measures the time needed at the stated rate.

21. B — The correct choice is B because length multiplied by width gives $17 \times 8 = 136$. Other choices use a different operation or amount. The units are square meters, so the result answers the question. Keeping the units visible helps confirm that the calculation measures the surface covered by the pad.

22. C — The correct choice is C because twice the sum of length and width gives $2 \times (14 + 9) = 46$. Other choices use a different operation or amount. The units are meters, so the result answers the question. Keeping the units visible helps confirm that the calculation measures the distance around the inspection area.

23. A — The correct choice is A because length multiplied by width and height gives $5 \times 6 \times 8 = 240$. Other choices use a different operation or amount. The units are cubic meters, so the result answers the question. Keeping the units visible helps confirm that the calculation measures the space inside the tank section.

24. D — The correct choice is D because gallons multiplied by quarts per gallon gives $15 \times 4 = 60$. Other choices use a different operation or amount. The units are quarts, so the result answers the question. Keeping the units visible helps confirm that the calculation measures the converted volume. This check supports the stated units.

25. B — The correct choice is B because total milligrams divided by liters gives $208 / 8 = 26$. Other choices use a different operation or amount. The units are milligrams per liter, so the result answers the question. Keeping the units visible helps confirm that the calculation measures the amount in one liter.

26. A — The correct choice is A because the two submissions minus duplicates gives $22 + 31 - 7 = 46$. Other choices use a different operation or amount. The units are usable samples, so the result answers the question. Keeping the units visible helps confirm that the calculation measures the count after removing duplicates.

27. D — The correct choice is D because the original count plus its percentage increase gives $130 + 26 = 156$. Other choices use a different operation or amount. The units are samples, so the result answers the question. Keeping the units visible helps confirm that the calculation measures the new total after the increase.

28. C — The correct choice is C because the sum of equal-weight readings divided by two gives $(76 + 76) / 2 = 76$. Other choices use a different operation or amount. The units are units, so the result answers the question. Keeping the units visible helps confirm that the calculation measures the average of the two equal groups.

29. B — The correct choice is B because the stated fraction multiplied by the batch gives $(3/6) \times 78 = 39$. Other choices use a different operation or amount. The units are items, so the result answers the question. Keeping the units visible helps confirm that the calculation measures the portion inspected first.

30. C — The correct choice is C because sites multiplied by labels per site gives $12 \times 9 = 108$. Other choices use a different operation or amount. The units are labels, so the result answers the question. Keeping the units visible helps confirm that the calculation measures the label requirement at a constant rate.

31. A — The correct choice is A because total divided by workdays gives $720 / 8 = 90$. Other choices use a different operation or amount. The units are entries per day, so the result answers the question. Keeping the units visible helps confirm that the calculation measures the records assigned to each workday.

32. D — The correct choice is D because 10% multiplied by the queue gives $0.1 \times 380 = 38$. Other choices use a different operation or amount. The units are samples, so the result answers the question. Keeping the units visible helps confirm that the calculation measures the portion selected for follow-up.

33. A — The correct choice is A because the original amount minus the transferred amount gives $340 - 68 = 272$. Other choices use a different operation or amount. The units are containers, so the result answers the question. Keeping the units visible helps confirm that the calculation measures the amount left after the stated reduction.

34. C — The correct choice is C because total forms divided by sites gives $408 / 12 = 34$. Other choices use a different operation or amount. The units are forms per site, so the result answers the question. Keeping the units visible helps confirm that the calculation measures the workload assigned to one site.

35. D — The correct choice is D because total bottles divided by bottles per hour gives $126 / 21 = 6$. Other choices use a different operation or amount. The units are hours, so the result answers the question. Keeping the units visible helps confirm that the calculation measures the time needed at the stated rate.

36. B — The correct choice is B because the passage states The plan places settling after screening.. That supports the inference that The sequence identifies two physical treatment steps.. The other choices

infer a disinfection result that the plan does not state. A careful reader should use only information supplied by the passage and avoid adding assumptions.

37. B — The correct choice is B because the passage states The door was open when observed.. That supports the inference that The observation is limited to the inspection time.. The other choices assign a duration or cause not given in the note. A careful reader should use only information supplied by the passage and avoid adding assumptions.

38. C — The correct choice is C because the passage states Room B had the highest recorded temperature.. That supports the inference that The comparison supports a temperature finding only.. The other choices rank the rooms by cleanliness. A careful reader should use only information supplied by the passage and avoid adding assumptions.

39. D — The correct choice is D because the passage states The area was marked and supplies were requested.. That supports the inference that The passage gives those actions in sequence.. The other choices invent an unmentioned disposal method. A careful reader should use only information supplied by the passage and avoid adding assumptions.

40. A — The correct choice is A because the passage states Complaints decreased after the repair.. That supports the inference that The timing is reported, but causation is not established.. The other choices state that the repair definitely caused the decrease. A careful reader should use only information supplied by the passage and avoid adding assumptions.

41. C — The correct choice is C because the passage states Supplies were present and dispensers were filled.. That supports the inference that The checklist documents availability, not behavior frequency.. The other choices claim that workers washed hands at a particular rate. A careful reader should use only information supplied by the passage and avoid adding assumptions.

42. D — The correct choice is D because the passage states A cracked rack was identified for replacement.. That supports the inference that The document establishes a maintenance need.. The other choices claim that sample integrity was lost. A careful reader should use only information supplied by the passage and avoid adding assumptions.

43. B — The correct choice is B because the passage states The second stop was crossed out and initialed.. That supports the inference that The record shows a change without explaining its reason.. The other choices assume the stop was unsafe or unnecessary. A careful reader should use only information supplied by the passage and avoid adding assumptions.

44. A — The correct choice is A because the passage states The result is not yet reported.. That supports the inference that The message requests identification confirmation before completion.. The other choices treat the sample as positive or negative. A careful reader should use only information supplied by the passage and avoid adding assumptions.

45. A — The correct choice is A because the passage states The fan was running at the time of observation.. That supports the inference that Operation was observed, while performance was not

measured.. The other choices claim that the fan met a particular airflow standard. A careful reader should use only information supplied by the passage and avoid adding assumptions.

46. C — The correct choice is C because the passage states The highest reading was 7.. That supports the inference that The chart directly supplies the maximum value.. The other choices claim why the readings changed. A careful reader should use only information supplied by the passage and avoid adding assumptions. This check supports the stated units.

47. B — The correct choice is B because the passage states An odor was reported near the dock at the stated time.. That supports the inference that The report identifies a location and time, not a confirmed source.. The other choices name a source without an investigation. A careful reader should use only information supplied by the passage and avoid adding assumptions.

48. D — The correct choice is D because the passage states Label the container.. That supports the inference that The procedure states the order explicitly.. The other choices reverse the sequence or add an unstated step. A careful reader should use only information supplied by the passage and avoid adding assumptions. This check supports the stated units.

49. D — The correct choice is D because the passage states Two readings were described as above the usual range.. That supports the inference that The summary supports the comparison as written.. The other choices calculate the amount above the range. A careful reader should use only information supplied by the passage and avoid adding assumptions.

50. A — The correct choice is A because the passage states A valve is located near the sampling point.. That supports the inference that The map supplies location information only.. The other choices infer the valve's operating position. A careful reader should use only information supplied by the passage and avoid adding assumptions.

51. C — The correct choice is C because the passage states The container's condition and label were checked on receipt.. That supports the inference that The note addresses receipt condition, not transport duration.. The other choices claim that transport met a particular time limit. A careful reader should use only information supplied by the passage and avoid adding assumptions.

52. B — The correct choice is B because the passage states Keep the walkway clear during the move.. That supports the inference that The instruction directly identifies the immediate safety purpose.. The other choices infer a different reason not named in the notice. A careful reader should use only information supplied by the passage and avoid adding assumptions.

53. B — The correct choice is B because the passage states Site C has the fewest listed corrective actions.. That supports the inference that The table allows a count comparison.. The other choices claim that Site C is safest overall. A careful reader should use only information supplied by the passage and avoid adding assumptions.

54. A — The correct choice is A because the passage states The follow-up inspection.. That supports the inference that The wording gives repair first and follow-up second.. The other choices claim that the

follow-up already occurred. A careful reader should use only information supplied by the passage and avoid adding assumptions. This check supports the stated units.

55. C — The correct choice is C because the passage states The equipment in that room was not evaluated.. That supports the inference that The report explains the limit of the inspection.. The other choices assume the equipment was compliant or defective. A careful reader should use only information supplied by the passage and avoid adding assumptions.

56. D — The correct choice is D because the passage states Immediate.. That supports the inference that The definition and facts match directly.. The other choices use a different classification without evidence. A careful reader should use only information supplied by the passage and avoid adding assumptions. This method distinguishes a supported conclusion from a plausible but unproved detail.

57. C — The correct choice is C because the passage states No report was recorded on Tuesday.. That supports the inference that The summary explicitly identifies the missing day.. The other choices infer why no report was received. A careful reader should use only information supplied by the passage and avoid adding assumptions.

58. D — The correct choice is D because the passage states The bin and floor were observed in acceptable condition.. That supports the inference that The note supports a limited observation about physical conditions.. The other choices make unsupported claims about training or overall compliance. A careful reader should use only information supplied by the passage and avoid adding assumptions.

59. B — The correct choice is B because the passage states The log documents collection details.. That supports the inference that The record can be traced to the collection event.. The other choices claim that the sample passed laboratory analysis. A careful reader should use only information supplied by the passage and avoid adding assumptions.

60. A — The correct choice is A because the passage states Inspect the drain and record what is observed.. That supports the inference that The assignment begins with direct observation and documentation.. The other choices assume a blockage or report a result before checking. A careful reader should use only information supplied by the passage and avoid adding assumptions.

61. A — The correct choice is A because verification helps distinguish a true change from collection or measurement error. This matters in field work because it guides observation, sampling, prevention, or follow-up. The other choices overreact, discard evidence, or claim an unsupported cause. The best answer therefore connects the stated condition with the relevant public-health principle.

62. B — The correct choice is B because hazard assessment and procedures provide a reasoned basis for protection. This matters in field work because it guides observation, sampling, prevention, or follow-up. The other choices ignore uncertainty or use an unreliable safety test. The best answer therefore connects the stated condition with the relevant public-health principle.

63. C — The correct choice is C because pathogens are biological agents associated with infection and illness. This matters in field work because it guides observation, sampling, prevention, or follow-up. The

other choices are not infectious agents. The best answer therefore connects the stated condition with the relevant public-health principle. This check supports the stated units.

64. D — The correct choice is D because damage can permit leakage or contamination. This matters in field work because it guides observation, sampling, prevention, or follow-up. The other choices do not correct the physical integrity problem. The best answer therefore connects the stated condition with the relevant public-health principle. This check supports the stated units.

65. A — The correct choice is A because the basin uses detention and gravity to remove settleable material. This matters in field work because it guides observation, sampling, prevention, or follow-up. The other choices are not the basin's primary treatment function. The best answer therefore connects the stated condition with the relevant public-health principle.

66. C — The correct choice is C because disinfectant can be used up by reactions with substances in the water. This matters in field work because it guides observation, sampling, prevention, or follow-up. The other choices overstate removal or deny chemical demand. The best answer therefore connects the stated condition with the relevant public-health principle.

67. D — The correct choice is D because representativeness links collection design to the question being asked. This matters in field work because it guides observation, sampling, prevention, or follow-up. The other choices favor convenience or conceal the condition of interest. The best answer therefore connects the stated condition with the relevant public-health principle.

68. B — The correct choice is B because hazard identification focuses attention on a possible source of harm. This matters in field work because it guides observation, sampling, prevention, or follow-up. The other choices do not describe a harmful condition or agent. The best answer therefore connects the stated condition with the relevant public-health principle.

69. A — The correct choice is A because documentation creates a record of the issue and the response. This matters in field work because it guides observation, sampling, prevention, or follow-up. The other choices promise prevention or remove the basis for follow-up. The best answer therefore connects the stated condition with the relevant public-health principle.

70. C — The correct choice is C because a leak can create a pathway for exposure in an accessible area. This matters in field work because it guides observation, sampling, prevention, or follow-up. The other choices do not describe an evident pathway from waste to people. The best answer therefore connects the stated condition with the relevant public-health principle.

71. D — The correct choice is D because calibration checks whether an instrument responds as expected. This matters in field work because it guides observation, sampling, prevention, or follow-up. The other choices do not provide an instrument reference comparison. The best answer therefore connects the stated condition with the relevant public-health principle.

72. A — The correct choice is A because clean hands interrupt one common route of transfer. This matters in field work because it guides observation, sampling, prevention, or follow-up. The other

choices overstate the measure or substitute unrelated controls. The best answer therefore connects the stated condition with the relevant public-health principle.

73. B — The correct choice is B because settling allows denser particles to move downward. This matters in field work because it guides observation, sampling, prevention, or follow-up. The other choices are used for different purposes or are not the gravity-settling step. The best answer therefore connects the stated condition with the relevant public-health principle.

74. C — The correct choice is C because suspended material can reduce contact between the disinfectant and organisms. This matters in field work because it guides observation, sampling, prevention, or follow-up. The other choices describe effects that do not follow from shielding. The best answer therefore connects the stated condition with the relevant public-health principle.

75. D — The correct choice is D because screens physically retain large objects before later treatment. This matters in field work because it guides observation, sampling, prevention, or follow-up. The other choices are not the primary purpose of a coarse screening step. The best answer therefore connects the stated condition with the relevant public-health principle.

76. B — The correct choice is B because the process depends on managed microbial activity and oxygen transfer. This matters in field work because it guides observation, sampling, prevention, or follow-up. The other choices do not describe the biological treatment mechanism. The best answer therefore connects the stated condition with the relevant public-health principle.

77. D — The correct choice is D because documented custody shows who handled the sample and when. This matters in field work because it guides observation, sampling, prevention, or follow-up. The other choices confuse traceability with accuracy or contamination prevention. The best answer therefore connects the stated condition with the relevant public-health principle.

78. A — The correct choice is A because the connection creates a possible pathway for contamination or backflow. This matters in field work because it guides observation, sampling, prevention, or follow-up. The other choices are measurements, containers, or treatment units rather than connections. The best answer therefore connects the stated condition with the relevant public-health principle.

79. C — The correct choice is C because backflow protection interrupts an unwanted reverse-flow pathway. This matters in field work because it guides observation, sampling, prevention, or follow-up. The other choices do not address the hazard described. The best answer therefore connects the stated condition with the relevant public-health principle. This check supports the stated units.

80. B — The correct choice is B because risk reasoning depends on linking where a hazard begins, how it travels, and who may encounter it. This matters in field work because it guides observation, sampling, prevention, or follow-up. The other choices omit one or more parts of that linkage. The best answer therefore connects the stated condition with the relevant public-health principle.

81. C — The correct choice is C because a clean sterile container helps preserve the meaning of the sample. This matters in field work because it guides observation, sampling, prevention, or follow-up.

The other choices do not prevent all source contamination or replace other controls. The best answer therefore connects the stated condition with the relevant public-health principle.

82. D — The correct choice is D because oxygen availability supports the intended aerobic microbial activity. This matters in field work because it guides observation, sampling, prevention, or follow-up. The other choices describe unrelated properties or overstate the result. The best answer therefore connects the stated condition with the relevant public-health principle.

83. B — The correct choice is B because moisture and accessible organic material can support vector activity. This matters in field work because it guides observation, sampling, prevention, or follow-up. The other choices do not provide the same environmental opportunity. The best answer therefore connects the stated condition with the relevant public-health principle.

84. A — The correct choice is A because pH is a measure related to hydrogen-ion activity. This matters in field work because it guides observation, sampling, prevention, or follow-up. The other choices measure count, mass, or flow rather than acidity. The best answer therefore connects the stated condition with the relevant public-health principle.

85. D — The correct choice is D because a residual shows remaining disinfectant, not absolute removal of every hazard. This matters in field work because it guides observation, sampling, prevention, or follow-up. The other choices claim certainty or describe unrelated properties. The best answer therefore connects the stated condition with the relevant public-health principle.

86. A — The correct choice is A because labeling preserves identification while details are fresh. This matters in field work because it guides observation, sampling, prevention, or follow-up. The other choices do not improve identification or sample chemistry. The best answer therefore connects the stated condition with the relevant public-health principle. This check supports the stated units.

87. C — The correct choice is C because smaller particles settle more slowly under the same conditions. This matters in field work because it guides observation, sampling, prevention, or follow-up. The other choices are not physical factors governing settling. The best answer therefore connects the stated condition with the relevant public-health principle.

88. B — The correct choice is B because filtration physically retains particles that fit the filter's removal capability. This matters in field work because it guides observation, sampling, prevention, or follow-up. The other choices overstate filtration or describe unrelated effects. The best answer therefore connects the stated condition with the relevant public-health principle.

89. D — The correct choice is D because air exchange can lower airborne concentration when properly designed and operated. This matters in field work because it guides observation, sampling, prevention, or follow-up. The other choices promise certainty, replace controls, or reverse the effect. The best answer therefore connects the stated condition with the relevant public-health principle.

90. A — The correct choice is A because PPE reduces contact when hazards remain after other controls. This matters in field work because it guides observation, sampling, prevention, or follow-up. The other

choices confuse a protective barrier with elimination or documentation. The best answer therefore connects the stated condition with the relevant public-health principle.

91. C — The correct choice is C because clean handling reduces transfer from one sample to another. This matters in field work because it guides observation, sampling, prevention, or follow-up. The other choices increase the chance of contamination or loss of identity. The best answer therefore connects the stated condition with the relevant public-health principle.

92. A — The correct choice is A because microorganisms transform usable organic substrates during treatment. This matters in field work because it guides observation, sampling, prevention, or follow-up. The other choices are physical, universal, or unrelated to the process. The best answer therefore connects the stated condition with the relevant public-health principle.

93. B — The correct choice is B because controls provide a comparison that can reveal process problems. This matters in field work because it guides observation, sampling, prevention, or follow-up. The other choices promise safety or alter the sample purpose. The best answer therefore connects the stated condition with the relevant public-health principle.

94. C — The correct choice is C because a grab sample is a snapshot rather than a continuous record. This matters in field work because it guides observation, sampling, prevention, or follow-up. The other choices extend the sample beyond what its collection design supports. The best answer therefore connects the stated condition with the relevant public-health principle.

95. D — The correct choice is D because contact with a contaminated surface creates a transfer pathway. This matters in field work because it guides observation, sampling, prevention, or follow-up. The other choices reverse or ignore the contamination risk. The best answer therefore connects the stated condition with the relevant public-health principle.

96. B — The correct choice is B because preservation protects the sample until analysis. This matters in field work because it guides observation, sampling, prevention, or follow-up. The other choices make the sample less traceable or less stable. The best answer therefore connects the stated condition with the relevant public-health principle. This check supports the stated units.

97. D — The correct choice is D because attached communities can persist on wet surfaces and behave differently from free cells. This matters in field work because it guides observation, sampling, prevention, or follow-up. The other choices are not attached microbial communities. The best answer therefore connects the stated condition with the relevant public-health principle.

98. A — The correct choice is A because lack of turnover can change local water conditions. This matters in field work because it guides observation, sampling, prevention, or follow-up. The other choices state universal effects that are not supported. The best answer therefore connects the stated condition with the relevant public-health principle.

99. C — The correct choice is C because a thermometer measures how hot or cold the sample is. This matters in field work because it guides observation, sampling, prevention, or follow-up. The other

choices are measured by other instruments or methods. The best answer therefore connects the stated condition with the relevant public-health principle.

100. B — The correct choice is B because suspended particles scatter light and make water appear cloudy. This matters in field work because it guides observation, sampling, prevention, or follow-up. The other choices describe different measurements. The best answer therefore connects the stated condition with the relevant public-health principle. It also helps a trainee explain the decision clearly in an inspection record.