

Registration form

**Water Treatment Primer 2 Training Course \$100.00
48 HOUR RUSH ORDER PROCESSING FEE ADDITIONAL \$50.00**

Start and Finish Dates: _____
You will have 90 days from this date in order to complete this course

Name _____ **Signature** _____
I have read and understood the disclaimer notice on page 2. Digitally sign XXX

Address _____

City _____ **State** _____ **Zip** _____

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Phone:
Home (____) _____ **Work (____)** _____

Operator ID # _____ **Exp. Date** _____

List hours worked on assignment must match State Requirement. _____

Please circle/check which certification you are applying the course CEU's/PDH's.

Water Treatment _____ Distribution _____ Other _____

Your certificate will be mailed to you in about two weeks.
Technical Learning College TLC PO Box 3060, Chino Valley, AZ 86323
Toll Free (866) 557-1746 Fax (928) 272-0747 info@tlch2o.com

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DISCLAIMER NOTICE

I understand that it is my responsibility to ensure that this CEU course is either approved or accepted in my State for CEU credit. I understand State laws and rules change on a frequent basis and I believe this course is currently accepted in my State for CEU or contact hour credit, if it is not, I will not hold Technical Learning College responsible. I fully understand that this type of study program deals with dangerous, changing conditions and various laws and that I will not hold Technical Learning College, Technical Learning Consultants, Inc. (TLC) liable in any fashion for any errors, omissions, advice, suggestions or neglect contained in this CEU education training course or for any violation or injury, death, neglect, damage or loss of your license or certification caused in any fashion by this CEU education training or course material suggestion or error or my lack of submitting paperwork. It is my responsibility to call or contact TLC if I need help or assistance and double-check to ensure my registration page and assignment has been received and graded. It is my responsibility to ensure all information is correct and to abide with all rules and regulations.

State Approval Listing Link, check to see if your State accepts or has pre-approved this course. Not all States are listed. Not all courses are listed. If the course is not accepted for CEU credit, we will give you the course free if you ask your State to accept it for credit.

Professional Engineers; Most states will accept our courses for credit but we do not officially list the States or Agencies. Please check your State for approval.

State Approval Listing URL...

<http://www.tlch2o.com/PDF/CEU%20State%20Approvals.pdf>

You can obtain a printed version from TLC for an additional \$69.95 plus shipping charges.

AFFIDAVIT OF EXAM COMPLETION

I affirm that I personally completed the entire text of the course. I also affirm that I completed the exam without assistance from any outside source. I understand that it is my responsibility to file or maintain my certificate of completion as required by the state or by the designation organization.

Grading Information

In order to maintain the integrity of our courses we do not distribute test scores, percentages or questions missed. Our exams are based upon pass/fail criteria with the benchmark for successful completion set at 70%. Once you pass the exam, your record will reflect a successful completion and a certificate will be issued to you.

For security purposes, please fax or e-mail a copy of your driver's license and always call us to confirm we've received your assignment and to confirm your identity.

Thank you...

All downloads are electronically tracked and monitored for security purposes.

Water Treatment Primer 2 Answer Key

Name _____

Phone _____

You are solely responsible in ensuring that this course is accepted for credit by your State. Did you check with your State agency to ensure this course is accepted for credit?

Method of Course acceptance confirmation. Please fill this section

Website ___ Telephone Call ___ Email ___ Spoke to _____

Did you receive the approval number if Applicable? _____

What is the approval number if Applicable? _____

You are responsible to ensure that TLC receives the Assignment and Registration Key. Please call us to ensure that we received it.

1. ***You can use Adobe Acrobat DC Program to complete the assignment***

Please circle, underline, bold or X only one correct answer

- | | | |
|-----------------|-----------------|-----------------|
| 1. A B C D E F | 11. A B C D E F | 21. A B C D E F |
| 2. A B C D E F | 12. A B C D E F | 22. A B C D E F |
| 3. A B C D E F | 13. A B C D E F | 23. A B C D E F |
| 4. A B C D E F | 14. A B C D E F | 24. A B C D E F |
| 5. A B C D E F | 15. A B C D E F | 25. A B C D E F |
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31. A B C D E F 53. A B C D E F 75. A B C D E F
32. A B C D E F 54. A B C D E F 76. A B C D E F
33. A B C D E F 55. A B C D E F 77. A B C D E F
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36. A B C D E F 58. A B C D E F 80. A B C D E F
37. A B C D E F 59. A B C D E F 81. A B C D E F
38. A B C D E F 60. A B C D E F 82. A B C D E F
39. A B C D E F 61. A B C D E F 83. A B C D E F
40. A B C D E F 62. A B C D E F 84. A B C D E F
41. A B C D E F 63. A B C D E F 85. A B C D E F
42. A B C D E F 64. A B C D E F 86. A B C D E F
43. A B C D E F 65. A B C D E F 87. A B C D E F
44. A B C D E F 66. A B C D E F 88. A B C D E F
45. A B C D E F 67. A B C D E F 89. A B C D E F
46. A B C D E F 68. A B C D E F 90. A B C D E F
47. A B C D E F 69. A B C D E F 91. A B C D E F
48. A B C D E F 70. A B C D E F 92. A B C D E F
49. A B C D E F 71. A B C D E F 93. A B C D E F
50. A B C D E F 72. A B C D E F 94. A B C D E F
51. A B C D E F 73. A B C D E F 95. A B C D E F
52. A B C D E F 74. A B C D E F 96. A B C D E F

97. A B C D E F 115. A B C D E F 133. A B C D E F
98. A B C D E F 116. A B C D E F 134. A B C D E F
99. A B C D E F 117. A B C D E F 135. A B C D E F
100. A B C D E F 118. A B C D E F 136. A B C D E F
101. A B C D E F 119. A B C D E F 137. A B C D E F
102. A B C D E F 120. A B C D E F 138. A B C D E F
103. A B C D E F 121. A B C D E F 139. A B C D E F
104. A B C D E F 122. A B C D E F 140. A B C D E F
105. A B C D E F 123. A B C D E F 141. A B C D E F
106. A B C D E F 124. A B C D E F 142. A B C D E F
107. A B C D E F 125. A B C D E F 143. A B C D E F
108. A B C D E F 126. A B C D E F 144. A B C D E F
109. A B C D E F 127. A B C D E F 145. A B C D E F
110. A B C D E F 128. A B C D E F 146. A B C D E F
111. A B C D E F 129. A B C D E F 147. A B C D E F
112. A B C D E F 130. A B C D E F 148. A B C D E F
113. A B C D E F 131. A B C D E F 149. A B C D E F
114. A B C D E F 132. A B C D E F 150. A B C D E F

Please fax the answer key to TLC Western Campus Fax (928) 272-0747. Always call us after faxing the paperwork to ensure that we've received it.

Rush Grading Service

If you need this assignment graded and the results mailed to you within a 48-hour period, prepare to pay an additional rush service handling fee of \$50.00. This fee may not cover postage costs. If you need this service, simply write RUSH on the top of your Registration Form. We will place you in the front of the grading and processing line.

Grading Information

In order to maintain the integrity of our courses we do not distribute test scores, percentages or questions missed. Our exams are based upon pass/fail criteria with the benchmark for successful completion set at 70%. Once you pass the exam, your record will reflect a successful completion and a certificate will be issued to you.

Please e-mail or fax this survey along with your final exam

WATER TREATMENT PRIMER 2 CEU TRAINING COURSE

CUSTOMER SERVICE RESPONSE CARD

NAME: _____

E-MAIL _____ PHONE _____

PLEASE COMPLETE THIS FORM BY CIRCLING THE NUMBER OF THE APPROPRIATE ANSWER IN THE AREA BELOW.

1. Please rate the difficulty of your course.

Very Easy 0 1 2 3 4 5 Very Difficult

2. Please rate the difficulty of the testing process.

Very Easy 0 1 2 3 4 5 Very Difficult

3. Please rate the subject matter on the exam to your actual field or work.

Very Similar 0 1 2 3 4 5 Very Different

4. How did you hear about this Course? _____

5. How would you improve the course?

How about the price of the course?

Poor ____ Fair ____ Average ____ Good ____ Great ____

How was your customer service?

Poor ____ Fair ____ Average ____ Good ____ Great ____

Any other concerns or comments.

Water Treatment Primer 2 Training Course Assignment

The Assignment (Exam) is also available in Word on the Internet for your Convenience, please visit www.ABCTLC.com and download the assignment and e-mail it back to TLC.

You'll have 90 days from the start of this course to complete in order to receive your Professional Development Hours (**PDHs**) or Continuing Education Unit (**CEU**). A score of 70 % is necessary to pass this course. We prefer if this exam is proctored. No intentional trick questions. If you should need any assistance, please email all concerns and the completed manual to info@tlch2o.com.

We would prefer that you utilize the enclosed answer sheet in the front, but if you are unable to do so, type out your own answer key. Please include your name and address on your manual and make copy for yourself. You can e-mail or fax your Answer Key along with the Registration Form to TLC. **(S) Means answer may be plural or singular. Multiple Choice Section, One answer per question and please use the answer key.**

Water Disinfectant Terminology

1. Many water suppliers add _____ to drinking water to kill germs such as giardia and e coli. Especially after heavy rainstorms, your water system may add more disinfectant to guarantee that these germs are killed.

- A. Chlorine
- B. Chlorine Dioxide
- C. A disinfectant
- D. Chloramine
- E. Alternative disinfectant(s)
- F. None of the Above

2. _____ Some people who use drinking water containing chlorine well in excess of the EPA standard could experience irritating effects to their eyes and nose.

- A. Chlorine
- B. Chlorine Dioxide
- C. A disinfectant
- D. Chloramine
- E. Alternative disinfectant(s)
- F. None of the Above

3. _____ Some people who use drinking water containing chloramines well in excess of the EPA standard could experience irritating effects to their eyes and nose.

- A. Chlorine
- B. Chlorine Dioxide
- C. A disinfectant
- D. Chloramine
- E. Alternative disinfectant(s)
- F. None of the Above

4. _____ Some infants and young children who drink water containing chlorine dioxide in excess of the EPA standard could experience nervous system effects. Similar effects may occur in fetuses of pregnant women who drink water containing chlorine dioxide in excess of the EPA standard. Some people may experience anemia.

- A. Chlorine
- B. Chlorine Dioxide
- C. A disinfectant
- D. Chloramine
- E. Alternative disinfectant(s)
- F. None of the Above

Disinfection Byproducts

5. Disinfection byproducts form when _____ added to drinking water to kill germs react with naturally-occurring organic matter in water.

- A. Chlorine
- B. Chlorine Dioxide
- C. Disinfectants
- D. Chloramine
- E. Alternative disinfectant(s)
- F. None of the Above

SOC Section

SOC Introduction

6. Synthetic Organic Chemicals are organic chemicals that are less volatile than?
- A. Volatile Organic Compounds (VOCs) D. Maximum Contaminant Levels (MCL)
B. Synthetic Organic Chemicals (SOCs) E. Organic compounds
C. Polychlorinated Biphenyls (PCBs) F. None of the Above
7. Which of the following terms are used as pesticides, defoliants, fuel additives and as ingredients for other organic compounds?
- A. Volatile Organic Compounds (VOCs) D. Maximum Contaminant Levels (MCL)
B. Synthetic Organic Chemicals (SOCs) E. Organic compounds
C. Polychlorinated Biphenyls (PCBs) F. None of the Above
8. Some of the more well-known SOC's are Atrazine, 2,4-D, Dioxin and?
- A. Volatile Organic Compounds (VOCs) D. Maximum Contaminant Levels (MCL)
B. Synthetic Organic Chemicals (SOCs) E. Organic compounds
C. Polychlorinated Biphenyls (PCBs) F. None of the Above
9. Which of the following terms are are very persistent in the environment, whether in soil or water?
- A. Volatile Organic Compounds (VOCs) D. Maximum Contaminant Levels (MCL)
B. Synthetic Organic Chemicals (SOCs) E. Organic compounds
C. Polychlorinated Biphenyls (PCBs) F. None of the Above

Volatile Organic Compounds (VOCs)

VOCs Explained

10. Which of the following terms are are organic chemicals that have a high vapor pressure at ordinary, room-temperature conditions?
- A. Volatile Organic Compounds (VOCs) D. Maximum Contaminant Levels (MCL)
B. Synthetic Organic Chemicals (SOCs) E. Organic compounds
C. Polychlorinated Biphenyls (PCBs) F. None of the Above
11. Which of the following terms are of VOCs?
- A. 60 organic chemicals D. Elevated odors
B. Most scents or odors E. Chemical compounds
C. Three contaminant groups F. None of the Above

Antimony

12. Antimony is a toxic chemical element with symbol **Sb** and atomic number 51. A lustrous gray metalloid, it is found in nature mainly as the?
- A. Contaminant D. Subsequent element
B. Analytical element E. Stibnite with iron
C. Sulfide mineral stibnite (Sb_2S_3) F. None of the Above

What are EPA's drinking water regulations for antimony?

13. Which of the following terms are based solely on possible health risks and exposure over a lifetime with an adequate margin of safety?
- A. Grey areas are D. Non-enforceable health goals
B. Enforceable health goals E. Maximum contaminant levels (MCLs)
C. Nitrogen group contaminants F. None of the Above

14. Contaminants are _____ or matter in water.
 A. Contaminants D. Organic and inorganic
 B. Analytical problems E. Prominent additives
 C. Commonly found F. None of the Above
15. EPA has set an enforceable regulation for antimony, called a _____, at 0.006 mg/L or 6 ppb.
 A. MCLG D. Emergency Planning and Community Right to Know Act (EPCRA)
 B. MCL E. EPA
 C. CWA F. None of the Above
16. MCLs are set as close to the health goals as possible, considering cost, benefits and the ability of public water systems to detect and remove contaminants using suitable treatment technologies. In this case, the MCL equals the _____, because analytical methods or treatment technology do not pose any limitation.
 A. MCLG D. Goal
 B. MCLs E. EPA
 C. Weight or law F. None of the Above

Asbestos

17. The MCLG for asbestos is 7 _____. EPA has set this level of protection based on the best available science to prevent potential health problems.
 A. MCLG D. Emergency Planning and Community Right to Know Act (EPCRA)
 B. MCLs E. EPA
 C. MFL F. None of the Above
18. MCLs are set as close to the health goals as possible, considering cost, benefits and the ability of public water systems to detect and remove contaminants using suitable treatment technologies. In this case, the _____, because analytical methods or treatment technology do not pose any limitation.
 A. MCLG D. EPCRA
 B. MCL equals the MCLG E. EPA
 C. MFL F. None of the Above

19. The Phase II Rule, the regulation for asbestos, became effective in 1992. The Safe Drinking Water Act requires EPA to periodically review the national primary drinking water regulation for each contaminant and revise the regulation, if appropriate. EPA reviewed asbestos as part of the Six Year Review and determined that the 7 MFL MCLG and _____ for asbestos are still protective of human health.
 A. MCLG D. Emergency Planning and Community Right to Know Act (EPCRA)
 B. MCL equals the MCLG E. 7 MFL MCL
 C. MFL F. None of the Above

Barium

20. In 1974, Congress passed the?
 A. MCLG D. EPCRA
 B. Phase IIB Rule E. EPA
 C. Safe Drinking Water Act F. None of the Above

21. The MCLG for barium is 2 mg/L or 2 ppm. EPA has set this level of protection based on the best available science to prevent potential health problems. EPA has set an enforceable regulation for barium, called a maximum contaminant level (MCL), at?

- A. MCLG
- B. MCL equals the MCLG
- C. MFL
- D. EPCRA
- E. 2 mg/L or 2 ppm
- F. None of the Above

22. MCLs are set as close to the health goals as possible, considering cost, benefits and the ability of public water systems to detect and remove contaminants using suitable treatment technologies. In this case, the _____, because analytical methods or treatment technology do not pose any limitation.

- A. MCLG
- B. MCL equals the MCLG
- C. EPA
- D. SDWA
- E. 2 mg/L or 2 ppm
- F. None of the Above

23. The _____, the regulation for barium, became effective in 1993. The Safe Drinking Water Act requires EPA to periodically review the national primary drinking water regulation for each contaminant and revise the regulation, if appropriate. EPA reviewed barium as part of the Six Year Review and determined that the 2 mg/L or 2 ppm MCLG and 2 mg/L or 2 ppm MCL for barium are still protective of human health.

- A. MCLG
- B. Phase IIB Rule
- C. Safe Drinking Water Act
- D. EPCRA
- E. EPA
- F. None of the Above

24. The major sources of barium in drinking water are discharge of drilling wastes; _____ and erosion of natural deposits.

- A. Discharge from metal refineries
- B. Barium
- C. Barium carbonate, BaCO₃
- D. Soluble barium compounds
- E. Its high chemical reactivity
- F. None of the Above

Beryllium

25. In 1974, Congress passed the Safe Drinking Water Act. This law requires OSHA to determine the level of contaminants in drinking water at which adverse health effects are likely to occur. These non-enforceable health goals, based solely on possible health risks and exposure over a lifetime with an adequate margin of safety.

- A. True
- B. False

26. The MCLG for beryllium is 0.04 mg/L or 40 ppb. EPA has set this level of protection based on the best available science to assist potential health problems. EPA has set an enforceable regulation for beryllium, called a maximum contaminant level (MCL), at 0.04 mg/L or 40 ppb.

- A. True
- B. False

27. MCLGs are set as close to the health goals as possible, considering cost, benefits and the ability of public water systems to promote contaminants using suitable treatment technologies. In this case, the MCLG equals the MCLG, because analytical methods or treatment technology do not pose any limitation.

- A. True
- B. False

28. The _____, the regulation for beryllium, became effective in 1994. The Safe Drinking Water Act requires EPA to periodically review the national primary drinking water regulation for each contaminant and revise the regulation, if appropriate.
- A. Phase V Rule D. Emergency Planning and Community Right to Know Act (EPCRA)
 B. MCL E. EPA
 C. Group 2 F. None of the Above

How does Beryllium get into my Drinking Water?

29. The major source of Beryllium environmental releases from _____ are coal and fuel oil combustion.
- A. Divalent elements D. Hardness and resistance to corrosion
 B. Brittle alkaline earth metal E. Waste batteries and paints
 C. Industrial waste disposal practices F. None of the Above

30. A federal law called the _____ requires facilities in certain industries, which manufacture, process, or use significant amounts of toxic chemicals, to report annually on their releases of these chemicals.
- A. Phase V Rule D. Emergency Planning and Community Right to Know Act (EPCRA)
 B. MCL E. EPA
 C. OSHA F. None of the Above

Cadmium - Inorganic Contaminant 0.005 mg/L MCL

31. In 1974, Congress passed the?
- B. CWA E. EPA
 C. Safe Drinking Water Act F. None of the Above

32. The MCLG for cadmium is?
- A. 4.0 D. .015
 B. .002 E. 0.005 mg/L or 5 ppb
 C. 1.3 F. None of the Above

33. EPA has set an enforceable regulation for cadmium, called a maximum contaminant level (MCL), at _____ are set as close to the health goals as possible.
- A. 4.0 D. .015
 B. .002 E. 0.005 mg/L or 5 ppb
 C. 1.3 F. None of the Above

34. EPA reviewed cadmium as part of the Six Year Review and determined that the _____ MCLG and 0.005 mg/L or 5 ppb MCL for cadmium are still protective of human health.
- A. 4.0 D. .015
 B. .002 E. 0.005 mg/L or 5 ppb
 C. 1.3 F. None of the Above

How does cadmium get into my drinking water?

35. The major sources of cadmium in drinking water are corrosion of galvanized pipes; erosion of natural deposits; _____; runoff from waste batteries and paints.
- A. It is a divalent element D. It may burn and release toxic fumes
 B. Brittle alkaline earth metal E. Discharge from metal refineries
 C. Coal and fuel oil combustion F. None of the Above

36. Water suppliers must notify their customers as soon as practical, but no later than ____ days after the system learns of the violation.
- A. 10 D. 30
 - B. 100 E. 45
 - C. 5 F. None of the Above

How will I know if cadmium is in my drinking water?

37. When routine monitoring indicates that cadmium levels are above the _____, your water supplier must take steps to reduce the amount of cadmium so that it is below that level.
- A. MCLG D. SDWA limit
 - B. MCL E. 2 mg/L or 2 ppm
 - C. EPA standard F. None of the Above

Copper

What are Copper's Health Effects?

38. Some people who drink water containing copper in excess of the _____ may, with short term exposure, experience gastrointestinal distress, and with long-term exposure may experience liver or kidney damage.
- A. MCLG D. Standard
 - B. MCL E. Action level
 - C. Limit F. None of the Above

What are EPA's Drinking Water Regulations for Copper?

39. The non-enforceable health goals, are based solely on possible health risks and exposure over a lifetime with an adequate margin of safety, are called?

- A. MCLG D. Standard
- B. MCL E. Action level
- C. Limit F. None of the Above

40. The _____ for copper is 1.3 mg/L or 1.3 ppm. EPA has set this level of protection based on the best available science to prevent potential health problems.

- A. MCLG D. Standard
- B. MCL E. Action level
- C. Limit F. None of the Above

41. Which of the following terms -as feasible, considering cost, benefits and the ability of public water systems to detect and remove contaminants?

- A. MCLG D. Standard
- B. MCL E. MCLs are set as close to the MCLGs
- C. Limit F. None of the Above

42. If more than 10 percent of tap water samples exceed the copper action level of 1.3 _____, water systems must take additional steps to reduce corrosiveness.

- A. MCLG D. Milligrams per Liter (mg/L)
- B. MCL E. Action level
- C. Limit F. None of the Above

43. Which of the following terms - promulgated the Lead and Copper Rule in 1991, and revised the regulation in 2000 and in 2007?

- A. CWA D. Emergency Planning and Community Right to Know Act (EPCRA)
- B. SDWA E. EPA
- C. OSHA F. None of the Above

Copper Explained

44. Pure copper is _____; a freshly exposed surface has a reddish-orange color.
- A. Known also as Lead
 - B. Soft and malleable
 - C. A carbon-nitrogen chemical
 - D. Related to turquoise
 - E. A liquid like Mercury
 - F. None of the Above
45. Its compounds are commonly encountered as _____, which often impart blue or green colors to minerals such as turquoise and have been widely used historically as pigments.
- A. Copper (II) salts
 - B. Element
 - C. Carbon-nitrogen chemical
 - D. A mixture of gold and copper
 - E. Salts
 - F. None of the Above

Cyanide

46. Cyanide is a carbon-nitrogen chemical unit which combines with many?
- A. Copper (II) salts
 - B. Organic and inorganic compounds
 - C. Carbon-nitrogen chemicals
 - D. Nitrogen atoms
 - E. Salts
 - F. None of the Above

Uses for Cyanide.

47. The most commonly used form, _____, is mainly used to make compounds and other synthetic fibers and resins.
- A. Copper (II) salts
 - B. Cyanide (II)
 - C. Carbon-nitrogen chemical
 - D. The nitrogen atom
 - E. Salts of the anion CN^-
 - F. None of the Above

What are Cyanide's Health Effects?

48. Some people who drink water containing cyanide well in excess of the maximum contaminant level (MCL) for many years could experience nerve damage or problems with their thyroid. This health effects language is not intended to catalog all possible health effects for cyanide. Rather, it is intended to inform consumers of some of the possible health effects associated with cyanide in drinking water when the rule was finalized.
- A. MCLG
 - B. MCLs
 - C. Group 2
 - D. Emergency Planning and Community Right to Know Act (EPCRA)
 - E. EPA
 - F. None of the Above

What are EPA's Drinking Water Regulations for Cyanide?

49. In 1974, Congress passed the Safe Drinking Water Act. This law requires EPA to determine the level of contaminants in drinking water at which no adverse health effects are likely to occur.
- A. True
 - B. False
50. Which of the following terms -are any physical, chemical, biological or radiological substances or matter in water?
- A. Naked contaminants
 - B. Halides
 - C. Contaminants
 - D. Solutions of inorganic contaminants
 - E. Cyanides
 - F. None of the Above
51. Which of the following terms -for cyanide is 0.2 mg/L or 200 ppb?
- A. MCLG
 - B. MCL
 - C. Limit
 - D. Standard
 - E. MCLs are set as close to the MCLGs
 - F. None of the Above

52. _____, considering cost, benefits and the ability of public water systems to detect and remove contaminants using suitable treatment technologies. In this case, the MCL equals the MCLG, because analytical methods or treatment technology do not pose any limitation.
- A. MCLG
 - B. MCL
 - C. Limit
 - D. Standard
 - E. MCLs are set as close to the health goals as possible
 - F. None of the Above

53. The Phase V Rule, the regulation for cyanide, became effective in 1994. The Safe Drinking Water Act requires _____ to periodically review the national primary drinking water regulation for each contaminant and revise the regulation.
- A. MCLG
 - B. MCL
 - C. Limit
 - D. Standard
 - E. MCLs are set as close to the health goals as possible
 - F. None of the Above

Cyanide Explained

54. A cyanide is a chemical compound that contains the _____, which consists of a carbon atom triple-bonded to a nitrogen atom.
- A. Naked contaminants
 - B. Halides
 - C. Contaminants
 - D. Solutions of inorganic contaminants
 - E. Cyanides
 - F. None of the Above
55. Cyanides most commonly refer to _____ which is isoelectronic with carbon monoxide and with molecular nitrogen. Most cyanides are highly toxic.
- A. Cyanide salts
 - B. Salts of the anion CN^- ,
 - C. Carbon-nitrogen chemical
 - D. Solutions of salts of the anion CN^- ,
 - E. Cyanides solutions
 - F. None of the Above

Fluoride

What are EPA's Drinking Water Regulations for Fluoride?

56. In 1974, Congress passed the Safe Drinking Water Act. This law requires EPA to determine the level of contaminants in drinking water at which no adverse health effects are likely to occur. These non-enforceable health goals, based solely on possible health risks and exposure over a lifetime with an adequate margin of safety, are called maximum contaminant level goals (MCLG). _____ are any physical, chemical, biological or radiological substances or matter in water.
- A. MCLG
 - B. MCL
 - C. Limit
 - D. Standard
 - E. MCLs are set as close to the health goals as possible
 - F. None of the Above

57. Which of the following terms -for fluoride is 4.0 mg/L or 4.0 ppm?
- A. MCLG
 - B. MCL
 - C. Limit
 - D. Standard
 - E. MCLs are set as close to the health goals as possible
 - F. None of the Above

58. MCLs are set as close to the health goals as possible, considering cost, benefits and the ability of public water systems to detect and remove contaminants using suitable treatment technologies. In this case, the _____, because analytical methods or treatment technology do not pose any limitation.
- A. MCLG
 - B. MCL
 - C. Limit
 - D. Standard
 - E. MCL equals the MCLG
 - F. None of the Above

59. The level of the _____ was set based upon a balancing of the beneficial effects of protection from tooth decay and the undesirable effects of excessive exposures leading to discoloration.

- A. MCLG
- B. MCL
- C. Limit
- D. Secondary standard (SMCL)
- E. MCL equals the MCLG
- F. None of the Above

Fluoride Explained

60. Fluoride, structurally, and to some extent chemically, the _____ resembles the hydroxide ion.

- A. Naked fluoride
- B. Halides
- C. Fluoride
- D. Solutions of inorganic fluorides
- E. Fluoride ion
- F. None of the Above

Mercury

61. Which of the following terms - regulates mercury in drinking water to protect public health?

- A. MCLG
- B. MCLs
- C. SDWA
- D. Emergency Planning and Community Right to Know Act (EPCRA)
- E. EPA
- F. None of the Above

What is Mercury?

62. Mercury is a liquid metal found in natural deposits such as ores containing?

- A. Aluminum
- B. Ultraviolet light
- C. Cinnabar (mercuric sulfide)
- D. Mercury-aluminum amalgam
- E. Other elements
- F. None of the Above

What are Mercury's Health Effects?

63. Some people who drink water containing mercury well in excess of the maximum contaminant level (MCL) for many years could experience kidney damage. This health effects language is not intended to catalog all possible _____ for mercury.

- A. MCLG
- B. MCLs
- C. Health effects
- D. Standards
- E. EPA
- F. None of the Above

Nitrate (Measured as Nitrogen) - Inorganic Contaminant 10 mg/L MCL

64. EPA regulates _____ in drinking water to protect public health.

- A. Nitrates and nitrites
- B. Nitrate ion
- C. pH
- D. Nitrates are converted to nitrites
- E. Nitrate
- F. None of the Above

65. Which of the following terms may cause health problems if present in public or private water supplies in amounts greater than the drinking water standard set by EPA?

- A. Nitrates and nitrites
- B. Nitrate ion
- C. Nitrate
- D. Nitrates are converted to nitrites
- E. Various organic and inorganic compounds
- F. None of the Above

What is Nitrate?

66. Nitrates and nitrites are _____ which combine with various organic and inorganic compounds.

- A. Nitrogen-oxygen chemical units
- B. Nitrate ion
- C. Nitrate
- D. Nitrates are converted to nitrites
- E. Various organic and inorganic compounds
- F. None of the Above

Uses for Nitrate.

67. The greatest use of nitrates is as a fertilizer. Once taken into the body, nitrates are converted to _____.

- A. Nitrates and nitrites
- B. Nitrate ion
- C. Nitrate
- D. Nitrites
- E. Various organic and inorganic compounds
- F. None of the Above

68. The MCLG for nitrate is?

- A. 1 mg/L or 1 ppm
- B. 2 mg/L or 10 ppm
- C. 10 mg/L or 50 ppm
- D. 100 mg/L or 100 ppm
- E. 50 mg/L or 10 ppm
- F. None of the Above

69. EPA has set an enforceable regulation for nitrate, called a maximum contaminant level (MCL), at 10 mg/L or 10 ppm. _____, considering cost, benefits and the ability of public water systems to detect and remove contaminants using suitable treatment technologies.

- A. MCLG
- B. MCLs
- C. Limits
- D. MCLGs are set as close to the health goals as possible
- E. MCLs are set as close to the health goals as possible
- F. None of the Above

Nitrite (Measured as Nitrogen)

70. EPA regulates nitrite in drinking water to protect the environment.

- A. True
- B. False

71. Nitrite may cause health problems if present in public or private water supplies in amounts greater than the drinking water standard of 100 ppm

- A. True
- B. False

What is Nitrite?

72. Nitrates and nitrites are _____ which combine with various organic and inorganic compounds.

- A. Nitrogen-oxygen chemical units
- B. Nitrate ion
- C. Nitrate
- D. Nitrates are converted to nitrites
- E. Various organic and inorganic compounds
- F. None of the Above

Uses for Nitrite.

73. The greatest use of nitrates is as a fertilizer. Once taken into the body, _____ are converted to nitrites.

- A. Nitrites
- B. Nitrate ions
- C. Nitrates
- D. Nitrogen ions
- E. Various organic and inorganic compounds
- F. None of the Above

What are EPA's Drinking Water Regulations for Nitrite?

74. In 1974, Congress passed the Safe Drinking Water Act. This law requires EPA to determine the level of contaminants in drinking water at which no adverse health effects are likely to occur. These non-enforceable health goals, based solely on _____ and exposure over a lifetime with an adequate margin of safety, are called maximum contaminant level goals (MCLG).

- A. MCLG
- B. MCLs
- C. Limits
- D. MCLGs are set as close to the health goals as possible
- E. MCLs are set as close to the health goals as possible
- F. None of the Above

75. Contaminants are any physical, chemical, taste or color substances or matter in water.

- A. True
- B. False

76. The MCLG for nitrite is 1 mg/L or 1 ppm. EPA has set this level of protection based on the best available science to prevent potential health problems.

- A. True B. False

77. EPA has set an enforceable regulation for nitrite, called a maximum contaminant level (MCL), at 1 mg/L or 1 ppm.

- A. True B. False

How does Nitrite get into my Drinking Water?

78. The major sources of _____ in drinking water are runoff from fertilizer use; leaching from septic tanks, sewage; and erosion of natural deposits.

- A. Nitrites D. Nitrogen ions
B. Nitrate ion E. Various organic and inorganic compounds
C. Nitrate F. None of the Above

Selenium

79. Selenium (Se) is an essential element for _____, with the majority of our intake coming from foods such as nuts, cereals, meat, fish, and eggs.

- A. Vitamins D. Selenide or selenate compounds
B. Drinking water E. Human nutrition
C. Minerals F. None of the Above

80. The concentration of Selenium in drinking water is usually low, and comes from natural minerals. In soils, selenium often occurs in soluble forms such as selenate, which are leached into rivers very easily by runoff increasing the amount of?

- A. Selenium D. Selenide or selenate compounds
B. Selenium in drinking water E. An essential element
C. Minerals F. None of the Above

81. Which of the following terms is also a by-product of copper mining / smelting?

- A. Selenium D. Selenide or selenate compounds
B. Selenium in water E. An essential element for human nutrition
C. Minerals F. None of the Above

82. Acute toxicity caused by _____ or other sources of intake has been observed in laboratory animals and in animals grazing in areas where high selenium levels exist in the soil. The US EPA has established the MCL for selenium in water at 0.05 mg/l.

- A. Selenium D. Selenide or selenate compounds
B. Selenium in drinking water E. High levels of selenium in water
C. Minerals F. None of the Above

Selenium Explained

83. Selenium is found impurely in metal sulfide ores, where it partially replaces the sulfur. Commercially, selenium is produced as _____ in the refining of these ores, most often during copper production.

- A. Metal sulfide ores D. Silicon
B. Natural deposits E. Glutathione peroxidase
C. Antioxidant enzymes F. None of the Above

Thallium

84. Thallium is a metal found in natural deposits such as ores containing?

- A. Metal sulfide ores
- B. Natural deposits
- C. Selenium
- D. Silicon
- E. Other elements
- F. None of the Above

Uses for Thallium.

85. The greatest use of _____ is in specialized electronic research equipment.

- A. Nonselective toxicity
- B. Thallium
- C. Selenium
- D. Potassium ores
- E. This soft gray poor metal
- F. None of the Above

What are Thallium's Health Effects?

86. Some people who drink water containing thallium well in _____ for many years could experience hair loss, changes in their blood, or problems with their kidneys, intestines, or liver problems.

- A. MCLG
- B. MCLs
- C. The Phase II Rule
- D. MCLGs are set as close to the health goals as possible
- E. Excess of the maximum contaminant level (MCL)
- F. None of the Above

Chlorine Gas Section

87. Background: _____ is a pulmonary irritant with intermediate water solubility that causes acute damage in the upper and lower respiratory tract.

- A. Chlorine or Cl₂
- B. Chlorine Gas
- C. Odor threshold
- D. Leaks
- E. Hypochlorous acid
- F. None of the Above

88. Chlorine is a _____ at standard temperature and pressure. It is extremely reactive with most elements.

- A. Chlorine or Cl₂
- B. Chlorine Gas
- C. Odor threshold
- D. Yellowish-green gas
- E. Hypochlorous acid
- F. None of the Above

89. Cl₂ gas does not occur naturally, although chlorine can be found in?

- A. A number of compounds
- B. Chlorine Gas
- C. Odor threshold
- D. Leaks
- E. Hypochlorous acid
- F. None of the Above

90. Pathophysiology: Chlorine is a greenish-yellow, _____ at room temperature and atmospheric pressure.

- A. Chlorine or Cl₂
- B. Chlorine Gas
- C. Odor threshold
- D. Noncombustible gas
- E. Hypochlorous acid
- F. None of the Above

91. Exposure to _____ may be pro-longed because its moderate water solubility may not cause upper airway symptoms for several minutes.

- A. Chlorine or Cl₂
- B. Chlorine Gas
- C. Odor threshold
- D. Leaks
- E. Hypochlorous acid
- F. None of the Above

92. The odor threshold for chlorine is approximately 0.3-0.5 parts per million (ppm); however, distinguishing toxic air levels from _____ may be difficult until irritative symptoms are present.
- A. Chlorine or Cl₂
 - B. Chlorine Gas
 - C. Odor threshold
 - D. Leaks
 - E. Permissible air levels
 - F. None of the Above

Mechanism of Activity

93. The mechanisms of the above biological activity are poorly understood and the predominant anatomic site of injury may vary, depending on the _____ produced.

- A. Free oxygen radicals
- B. Chlorine Gas
- C. Chemical species
- D. Leaks
- E. Hypochlorous acid
- F. None of the Above

94. Cellular injury is believed to result from the oxidation of functional groups in cell components, from reactions with tissue water to form _____, and from the generation of free oxygen radicals.

- A. Free oxygen radicals
- B. Chlorine Gas
- C. Chemical species
- D. Hypochlorous and hydrochloric acid
- E. Hypochlorous acid
- F. None of the Above

95. Although the idea that chlorine causes direct tissue damage by generating _____ was once accepted, this idea is now controversial.

- A. Free oxygen radicals
- B. Chlorine Gas
- C. Chemical species
- D. Leaks
- E. Hypochlorous acid
- F. None of the Above

96. The _____ comes out of the cylinder through a gas regulator.

- A. Free oxygen radicals
- B. Gas
- C. Chemical species
- D. Leaks
- E. Hypochlorous acid
- F. None of the Above

97. Operators have the equipment necessary to reduce the impact of a _____, but rely on trained emergency response teams to contain leaks.

- A. Free oxygen radicals
- B. Chlorine Gas
- C. Chemical species
- D. Leak
- E. Gas leak
- F. None of the Above

Solubility Effects

98. Which of the following terms is highly soluble in water?

- A. Ammonia
- B. Chlorine Gas
- C. Hydrochloric acid
- D. Chlorine exposure
- E. Hypochlorous acid
- F. None of the Above

99. Which of the following terms is also highly water soluble with an injury pattern similar to hydrochloric acid?

- A. Ammonia
- B. Chlorine Gas
- C. Hydrochloric acid
- D. Chlorine exposure
- E. Hypochlorous acid
- F. None of the Above

100. Which of the following terms may account for the toxicity of elemental chlorine and hydrochloric acid to the human body.

- A. Ammonia
- B. Chlorine Gas
- C. Hydrochloric acid
- D. Chlorine exposure
- E. Hypochlorous acid
- F. None of the Above

Early Response to Chlorine Gas

101. Chlorine gas, when mixed with ammonia, reacts to form?

- A. Ammonia
- B. Chlorine Gas
- C. Hydrochloric acid
- D. Chloramine gas
- E. Hypochlorous acid
- F. None of the Above

102. The early response to _____ depends on the concentration of chlorine gas, duration of exposure, water content of the tissues exposed, and individual susceptibility.

- A. Ammonia
- B. Chlorine Gas
- C. Hydrochloric acid
- D. Chlorine exposure
- E. Hypochlorous acid
- F. None of the Above

Chlorine (DDBP)

103. Chlorine present as Cl , HOCl , and OCl^- is called _____ and that which is bound but still effective is combined chlorine.

- A. Free available chlorine
- B. Chlorine Gas
- C. Hydrochloric acid
- D. Chlorine exposure
- E. Hypochlorous acid
- F. None of the Above

104. One especially important feature of _____ using chlorine is the ease of overdosing to create a residual concentration.

- A. Break Point Chlorination
- B. Chlorine Gas
- C. Combined chlorine
- D. Safe water
- E. Disinfection
- F. None of the Above

105. There may be breaks in water mains, loss of pressure that permits an inward leak, or plumbing errors. This residual concentration of chlorine provides some degree of protection right to the water faucet. With free available chlorine, _____.

- A. Break Point Chlorination
- B. Chlorine Gas
- C. Combined chlorine
- D. Safe water
- E. A typical residual is from 0.1 to 0.5 ppm
- F. None of the Above

106. Which of the following terms are less effective, a typical residual is 2 ppm for combined chlorine?

- A. Break Point Chlorination
- B. Chlorine Gas
- C. Combined chlorine
- D. Chlorinated organic compounds
- E. The trihalomethanes (THMs)
- F. None of the Above

107. There will be _____ unless there is an excess over the amount that reacts with the organic matter present.

- A. Break Point Chlorination
- B. Chlorine Gas
- C. Combined chlorine
- D. Safe water
- E. No chlorine residual
- F. None of the Above

Chlorine by-products

108. Which of the following terms are the chemicals formed when the chlorine used to kill disease-causing micro-organisms reacts with naturally occurring organic matter in the water?

- A. THM concentrations
- B. THM levels
- C. Very high levels of THMs
- D. Chlorination by-products
- E. Trihalomethanes or THM(s) (s) means plural or singular
- F. None of the Above

109. The amount of _____ formed in drinking water can be influenced by a number of factors, including the season and the source of the water.

- A. THM concentrations
- B. THM levels
- C. Very high levels of THMs
- D. Other disinfectants
- E. THM(s) (s) means plural or singular
- F. None of the Above

110. Which of the following terms are generally lower in winter than in summer, because concentrations of natural organic matter are lower and less chlorine is required to disinfect at colder temperatures?

- A. THM concentrations
- B. THM levels
- C. Very high levels of THMs
- D. Other disinfectants
- E. Trihalomethanes or THM(s) (s) means plural or singular
- F. None of the Above

111. Which of the following terms are also low when wells or large lakes are used as the drinking water source, because organic matter concentrations are generally low in these sources?

- A. THM concentrations
- B. THM levels
- C. Very high levels of THMs
- D. Other disinfectants
- E. Trihalomethanes or THM(s) (s) means plural or singular
- F. None of the Above

Health Effects

112. Laboratory animals exposed to very high levels of _____ have shown increased incidences of cancer.

- A. THM concentrations
- B. THM levels
- C. Very high levels of THMs
- D. Other disinfectants
- E. THM(s) (s) means plural or singular
- F. None of the Above

113. For instance, a recent study conducted in the Great Lakes basin reported an increased risk of bladder and possibly colon cancer in people who drank _____ for 35 years or more.

- A. Chlorinated surface water
- B. Chlorine Gas
- C. Combined chlorine
- D. Other disinfectants
- E. Trihalomethanes or THM(s) (s) means plural or singular
- F. None of the Above

Risks and Benefits of Chlorine

114. Current evidence indicates the benefits of chlorinating our drinking water — reduced incidence of water-borne diseases — are much greater than the risks of health effects from ?

- A. THM concentrations
- B. THM levels
- C. Very high levels of THMs
- D. Other disinfectants
- E. THM(s) (s) means plural or singular
- F. None of the Above

115. Although other disinfectants are available, _____ continues to be the choice of water treatment experts.

- A. Ozone
- B. Chlorine
- C. Combined chlorine
- D. Other disinfectants
- E. Trihalomethanes or THM(s) (s) means plural or singular
- F. None of the Above

116. It is easy to apply, and most importantly, _____ remain in the water and continue to disinfect throughout the distribution system.

- A. Ozone
- B. Chlorine Gas
- C. Combined chlorine
- D. Other disinfectants
- E. Small amounts of chlorine
- F. None of the Above

117. A number of cities use ozone to disinfect their source water and to reduce?

- A. THM concentrations
- B. THM levels
- C. Very high levels of THMs
- D. Other disinfectants
- E. THM formation
- F. None of the Above

118. Which of the following terms is a highly effective disinfectant, it breaks down quickly, so that small amounts of chlorine or other disinfectants must be added to the water to ensure continued disinfection as the water is piped to the consumer's tap.

- A. Ozone
- B. Chlorine Gas
- C. Chloramine(s)
- D. Alternative disinfectants
- E. Chlorine dioxide
- F. None of the Above

119. Modifying water treatment facilities to use ozone can be expensive, and _____ treatment can create other undesirable by-products that may be harmful to health if they are not controlled.

- A. Ozone
- B. Chlorine Gas
- C. Chloramine(s)
- D. Alternative disinfectants
- E. Chlorine dioxide
- F. None of the Above

120. Examples of other disinfectants include chloramines and?

- A. Ozone
- B. Chlorine Gas
- C. Chloramine(s)
- D. Alternative disinfectants
- E. Chlorine dioxide
- F. None of the Above

121. Which of the following terms are weaker disinfectants than chlorine, especially against viruses and protozoa?

- A. Ozone
- B. Chlorine Gas
- C. Chloramine(s)
- D. Alternative disinfectants
- E. Chlorine dioxide
- F. None of the Above

122. Assessments of the health risks from these and other chlorine-based disinfectants and _____ are currently under way.

- A. Ozone
- B. Chlorine Gas
- C. Chloramine(s)
- D. Alternative disinfectants
- E. Chlorination by-products
- F. None of the Above

123. Which of the following terms levels may also be reduced through the replacement of chlorine with alternative disinfectants?

- A. Ozone
- B. Chlorine Gas
- C. Chloramine(s)
- D. Alternative disinfectants
- E. Chlorine dioxide
- F. None of the Above

New EPA Rules

Arsenic

124. Arsenic is a chemical that occurs naturally in?

- A. Divalent elements
- B. Brittle alkaline earth metal
- C. Industrial waste disposal practices
- D. Hardness and resistance to corrosion
- E. Waste batteries and paints
- F. None of the Above

125. Studies have linked long-term exposure of _____ in drinking water to a variety of cancers in humans.

- A. Copper (II) salts
- B. Organic and inorganic compounds
- C. Carbon-nitrogen chemicals
- D. Nitrogen atoms
- E. Salts
- F. None of the Above

Water Sampling Terms, and Definitions

Microbes

126. Coliform bacteria are common in the environment and the presence of these bacteria in drinking water is usually a result of a problem with the treatment system or the pipes which distribute water, and indicates that the water may be contaminated with _____ that can cause disease.

- A. Pathogens
- B. Campylobacteriosis
- C. Cryptosporidium
- D. Giardia lamblia
- E. Bacteria, viruses, and protozoan
- F. None of the Above

127. Which of the following terms are bacteria whose presence indicates that the water may be contaminated with human or animal wastes?

- A. Fecal Coliform and E. coli
- B. Campylobacteriosis
- C. Cryptosporidium
- D. Giardia lamblia
- E. Bacteria, viruses, and protozoa
- F. None of the Above

128. Which of the following terms in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms?

- A. Pathogens
- B. Campylobacteriosis
- C. Cryptosporidium
- D. Microbes
- E. Bacteria, viruses, and protozoa
- F. None of the Above

129. Which of the following terms has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth.

- A. Turbidity
- B. Microbes
- C. Cryptosporidium
- D. Giardia lamblia
- E. Pathogens
- F. None of the Above

130. Which of the following terms may indicate the presence of disease causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

- A. Turbidity
- B. Microbes
- C. Cryptosporidium
- D. Giardia lamblia
- E. Pathogens
- F. None of the Above

131. Which of the following terms is a parasite that enters lakes and rivers through sewage and animal waste?

- A. Turbidity
- B. Microbes
- C. Cryptosporidium
- D. Giardia lamblia
- E. Pathogens
- F. None of the Above

132. The EPA and the CDC have prepared advice for those with severely compromised immune systems who are concerned about?

- A. Turbidity
- B. Microbes
- C. Cryptosporidium
- D. Giardia lamblia
- E. Pathogens
- F. None of the Above

133. Which of the following terms is a parasite that enters lakes and rivers through sewage and animal waste. It causes gastrointestinal illness.

- A. Turbidity
- B. Microbes
- C. Cryptosporidium
- D. Giardia lamblia
- E. Pathogens
- F. None of the Above

Waterborne Pathogens and Disease Section

134. Bacteria, viruses, and protozoan that cause disease are known as?

- A. Pathogens
- B. Campylobacteriosis
- C. Cryptosporidium
- D. Giardia lamblia
- E. Fast food
- F. None of the Above

135. Most pathogens are generally associated with _____ that cause intestinal illness and affect people in a relatively short amount of time, generally a few days to two weeks. They can cause illness through exposure to small quantities of contaminated water or food, or from direct contact with infected people or animals.

- A. Diseases
- B. Campylobacteriosis
- C. Cryptosporidium
- D. Giardia lamblia
- E. Bacteria, viruses, and protozoan
- F. None of the Above

How Diseases are Transmitted

136. Which of the following terms that may cause waterborne outbreaks through drinking water have one thing in common: they are spread by the fecal-oral or feces-to-mouth route?

- A. Pathogens
- B. Campylobacteriosis
- C. Cryptosporidium
- D. Giardia lamblia
- E. Diseases
- F. None of the Above

137. Which of the following terms may get into water and spread when infected humans or animals pass the bacteria, viruses, and protozoa in their stool?

- A. Pathogens
- B. Campylobacteriosis
- C. Cryptosporidium
- D. Giardia lamblia
- E. Diseases
- F. None of the Above

138. Which of the following terms are spread by secretions that are coughed or sneezed into the air by an infected person?

- A. Pathogens
- B. Campylobacteriosis
- C. Cryptosporidium
- D. Giardia lamblia
- E. Diseases
- F. None of the Above

139. Human or animal wastes in watersheds, failing septic systems, failing sewage treatment plants or cross-connections of water lines with sewage lines provide the potential for contaminating water with?

- A. Pathogens
- B. Campylobacteriosis
- C. Cryptosporidium
- D. Giardia lamblia
- E. Diseases
- F. None of the Above

140. The water may not appear to be contaminated because the feces have been broken up, dispersed, and diluted into?

- A. Pathogens
- B. Campylobacteriosis
- C. Cryptosporidium
- D. Giardia lamblia
- E. Bacteria, viruses, and protozoa
- F. None of the Above

141. These particles, containing _____, may remain in the water and be passed to humans or animals unless adequately treated.

- A. Pathogens
- B. Campylobacteriosis
- C. Cryptosporidium
- D. Giardia lamblia
- E. Bacteria, viruses, and protozoan
- F. None of the Above

Bacterial Diseases

142. Which of the following terms is frequently over within two to five days and usually lasts no more than 10 days?

- A. Pathogens
- B. Campylobacteriosis
- C. Cryptosporidium
- D. Giardia lamblia
- E. Bacteria, viruses, and protozoa
- F. None of the Above

143. Which of the following terms outbreaks have most often been associated with food, especially chicken and unpasteurized milk, as well as un-chlorinated water?

- A. Pathogens
- B. Campylobacteriosis
- C. Cryptosporidium
- D. Giardia lamblia
- E. Bacteria, viruses, and protozoan
- F. None of the Above

Positive or Coliform Present Results

What do you do when your sample is positive or coliform present?

144. When you are notified of _____ you need to contact either the Drinking Water Program or your local county health department within 24 hours, or by the next business day after the results are reported to you. The Drinking Water Program contracts with many of the local health departments to provide assistance to water systems.

- A. Colony-forming units (CFU)
- B. A positive test result
- C. Corrective measures
- D. MCL violations
- E. Heterotrophic Plate Count (HPC)
- F. None of the Above

145. After you have contacted an agency for assistance, you will be instructed as to the proper repeat sampling procedures and _____ for solving the problem. It is very important to initiate the repeat sampling immediately as the corrective measures will be based on those results.

- A. Colony-forming units (CFU)
- B. A positive test result
- C. Corrective measures
- D. Possible corrective measures
- E. Heterotrophic Plate Count (HPC)
- F. None of the Above

Maximum Contaminant Levels (MCLs)

146. State and federal laws establish standards for drinking water quality. Under normal circumstances when these standards are being met, the water is safe to drink with no threat to human health. These standards are known as maximum contaminant levels (MCL). When a particular contaminant exceeds its _____ a potential health threat may occur.

- A. Colony-forming units (CFU)
- B. A positive test result
- C. Corrective measures
- D. MCL
- E. Heterotrophic Plate Count (HPC)
- F. None of the Above

147. The MCLs are based on extensive research on toxicological properties of the contaminants, risk assessments and factors, _____. You conduct the monitoring to make sure your water is in compliance with the MCL.

- A. Colony-forming units (CFU)
- B. A positive test result
- C. Corrective measures
- D. MCL violations
- E. Short term (acute) exposure and long term (chronic) exposure
- F. None of the Above

148. There are two types of _____ for coliform bacteria.

- A. Colony-forming units (CFU)
- B. A positive test result
- C. Corrective measures
- D. MCL violations
- E. Heterotrophic Plate Count (HPC)
- F. None of the Above

Heterotrophic Plate Count HPC

149. Heterotrophic Plate Count (HPC) --- formerly known as the standard plate count, is a procedure for estimating the number of _____ and measuring changes during water treatment and distribution in water or in swimming pools.

- A. Colony-forming units (CFU)
- B. A positive test result
- C. Corrective measures
- D. Live heterotrophic bacteria
- E. Heterotrophic Plate Count (HPC)
- F. None of the Above

150. Which of the following terms may arise from pairs, chains, clusters, or single cells, all of which are included in the term "colony-forming units" (CFU).

- A. Colonies
- B. A positive test result
- C. Corrective measures
- D. MCL violations
- E. Heterotrophic Plate Count (HPC)
- F. None of the Above

You are finished with your assignment. Please email or fax your registration page and answer key to us. Always call an hour later to ensure we received it.