

## SELF-TESTS

In the matching section, there is only one answer to each question; however, the lettered options (a, b, c, etc.) may be used more than once or not at all.

### I. Matching

- |   |                             |
|---|-----------------------------|
| ___ 1. A suffix meaning "to kill."  | a. Disinfection             |
| ___ 2. Destroying or removing <i>all</i> forms of microbial life.                               | b. Sterilization            |
| ___ 3. The absence of pathogens on an object or area.   | c. Antisepsis               |
| ___ 4. The reduction of microbial populations to safe public health levels.                     | d. Asepsis                  |
| ___ 5. The chemical disinfection of living tissue, such as skin or a mucous membrane.           | e. Sanitization             |
| ___ 6. The removal of transient microbes from skin by mechanical cleansing or by an antiseptic. | f. Degerming                |
| ___ 7. Heat sufficient only to kill endospores of the botulism bacterium.                       | g. <i>-cide</i>             |
|   | h. <i>-stat</i>             |
|   | i. Commercial sterilization |

### II. Matching

- |   |                           |
|---|---------------------------|
| ___ 1. The lowest temperature required to kill a liquid culture of a certain species of bacteria in 10 minutes. | a. Thermal death time     |
| ___ 2. The time in minutes required to kill 90% of a bacterial population.                                      | b. Decimal reduction time |
| ___ 3. Mild heating to destroy particular spoilage organisms or disease organisms in milk or similar products.  | c. Thermal death point    |
| ___ 4. A test for the effectiveness of a chemical disinfectant.   | d. Phenol coefficient     |
| ___ 5. The absence of water, resulting in a condition of dryness.   | e. Pasteurization         |
|   | f. Desiccation            |
|   | g. Incineration           |

**III. Matching**

- |                                 |                                 |
|---------------------------------|---------------------------------|
| ___ 1. Ethylene oxide.          | a. Bisphenol                    |
| ___ 2. Sodium hypochlorite.     | b. Halogen                      |
| ___ 3. Copper sulfate.          | c. Alcohol                      |
| ___ 4. Silver nitrate.          | d. Heavy metal                  |
| ___ 5. Benzalkonium chloride.   | e. Quaternary ammonium compound |
| ___ 6. Acid-anionic detergents. | f. Surface-active agents        |
| ___ 7. Sorbic acid.             | g. Organic acid                 |
| ___ 8. Benzoyl peroxide.        | h. Aldehydes                    |
| ___ 9. Hexachlorophene.         | i. Gaseous chemosterilizer      |
| ___ 10. Isopropanol.            | j. Oxidizing agent              |

**IV. Matching**

- |  |                   |
|--|-------------------|
| ___ 1. An effective liquid sporicide.                | a. Peracetic acid |
| ___ 2. A bacteriocin classified as an antibiotic.    | b. Chlorhexidine  |
| ___ 3. Pimaricin.                                    | c. Triclosan      |
| ___ 4. A biguanide.                                  | d. Natamycin      |
| ___ 5. A bisphenol found in many household products. | e. Nisin          |
| ___ 6. An antibiotic antifungal.                     |                   |

**V. Matching**

- |   |                   |
|---|-------------------|
| ___ 1. Added to chlorine to form chloramines.                     | a. Iodophore      |
| ___ 2. An antibacterial effect of ultraviolet radiation on DNA.   | b. Formalin       |
| ___ 3. Formaldehyde in an aqueous solution.                       | c. Thymine dimers |
| ___ 4. An example would be iodine in an aqueous-alcohol solution. | d. Ammonia        |
| ___ 5. For example, povidone iodine solution.                     | e. Tincture       |

## VI. Matching

- |  |                                |
|--|--------------------------------|
| ___ 1. Chlorine in tablet form issued as a water purifier by the U.S. military.                              | a. Sodium dichloroisocyanurate |
| ___ 2. Name of a test that determines if milk has been properly pasteurized.                                 | b. Phosphatase                 |
| ___ 3. Used as an antiseptic in certain mouthwashes.   | c. Zinc chloride               |
| ___ 4. Used in many water treatment plants as a disinfectant; produced by electrical discharges at the site. | d. Sodium benzoate             |
| ___ 5. Antifungal organic compound used in food.   | e. Ozone                       |

## Fill in the Blanks

1. Ultraviolet light is an example of \_\_\_\_\_ radiation.
2. Sunlight owes its biocidal activity mainly to the formation of \_\_\_\_\_ oxygen.
3. A good example of ionizing radiation is \_\_\_\_\_.
4. Ethanol is usually used in a concentration of about \_\_\_\_\_.
5. A less irritating form of formaldehyde is \_\_\_\_\_.
6. A compound that would only inhibit the growth of a fungus would be a fungi \_\_\_\_\_.
7. Steam \_\_\_\_\_ allows temperatures above boiling to be reached.
8. Steam under pressure is obtained in retorts, pressure cookers, and \_\_\_\_\_.
9. Plasma gas sterilization makes use of vapors of \_\_\_\_\_.
10. Generally speaking, the group of organisms that is more resistant to osmotic pressure than bacteria is \_\_\_\_\_.

## Critical Thinking

1. What physical method of control would be most effective in each of the following situations?
  - a. To eliminate endospore-forming pathogens.
  - b. To sterilize milk for storage at room temperature.
  - c. To sterilize vaccines.
  - d. To sterilize microbiological media.

2. What chemical agent would be most effective in each of the following situations?
  - a. A puncture wound acquired while gardening.
  - b. For presurgical scrubbing.
  - c. To sterilize packaged bandages.
  - d. To prevent the growth of molds in liquid cosmetics.
3. Compare and contrast sterilization and sanitation.
4. Discuss the advantages and disadvantages associated with each of the following physical methods of control.
  - a. Osmotic pressure
  - b. Desiccation
  - c. Refrigeration
  - d. Filtration
5. Discuss the advantages and disadvantages of UV light as a method to control microbial growth.