

Microbiology / Active Lecture Questions
Chapter 7 – Control of Microbial Growth

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2 Which of the following does not kill endospores?

- a. autoclaving
- b. incineration
- c. hot-air sterilization
- d. pasteurization
- e. All of the above kill endospores.

3 Which of the following is most effective for sterilizing mattresses and plastic Petri dishes?

- a. chlorine
- b. ethylene oxide
- c. glutaraldehyde
- d. autoclaving
- e. nonionizing radiation

4 Which of these disinfectants does not act by disrupting the plasma membrane?

- a. phenolics
- b. phenol
- c. quaternary ammonium compounds
- d. halogens
- e. biguanides

5 Which of the following cannot be used to sterilize a heat-labile solution stored in a plastic container?

- a. gamma radiation
- b. ethylene oxide
- c. nonionizing radiation
- d. autoclaving
- e. short-wavelength radiation

6 Which of the following is not a characteristic of quaternary ammonium compounds?

- a. bactericidal against gram-positive bacteria
- b. sporicidal
- c. amoebicidal
- d. fungicidal
- e. kills enveloped viruses

Microbiology / Active Lecture Questions
Chapter 7 – Control of Microbial Growth

7 A classmate is trying to determine how a disinfectant might kill cells. You observed that when he spilled the disinfectant in your reduced litmus milk, the litmus turned blue again. You suggest to your classmate that

- a. the disinfectant might inhibit cell wall synthesis.
- b. the disinfectant might oxidize molecules.
- c. the disinfectant might inhibit protein synthesis.
- d. the disinfectant might denature proteins.
- e. he take his work away from yours.

8 Which of the following is most likely to be bactericidal?

- a. membrane filtration
- b. ionizing radiation
- c. lyophilization
- d. deep-freezing
- e. all of the above

9 Which of the following is used to control microbial growth in foods?

- a. organic acids
- b. alcohols
- c. aldehydes
- d. heavy metals
- e. all of the above

Bacterial Growth after Exposure to				
	Disinfectant	Disinfectant	Disinfectant	Disinfectant
Dilution	A	B	C	D
1:2	NG	G	NG	NG
1:4	NG	G	NG	G
1:8	NG	G	G	G
1:16	G	G	G	G

10 The data were obtained from a use-dilution test comparing four disinfectants against *Salmonella choleraesuis*. G = growth, NG = no growth.

Which disinfectant is the most effective?

- a. A, B, C, and D
- b. A, C, and D
- c. A only
- d. B only
- e. none of the above

Microbiology / Active Lecture Questions
Chapter 7 – Control of Microbial Growth

11 Which disinfectant(s) is (are) bactericidal?

- a. A, B, C, and D
- b. A, C, and D
- c. A only
- d. B only
- e. none of the above

12 The removal or destruction of all forms of microbial life is called

- a. Sterilization
- b. Disinfection
- c. Pasteurization
- d. Sanitization

13 Treatment intended to lower microbial counts on eating and drinking utensils to safe public health levels:

- a. Sanitization
- b. Sterilization
- c. Pasteurization
- d. Antisepsis

14 Commercial sterilization is a limited heat treatment to destroy

- a. *Streptococcus pyogenes*
- b. *Clostridium tetani*
- c. *Staphylococcus aureus*
- d. *Clostridium botulinum* endospores

15 Which of the following BEST describes the pattern of microbial death?

- a. The cells in a population die at a constant rate
- b. All the cells in a culture die at once
- c. Not all of the cells in a culture are killed
- d. The pattern varies, depending on the species

16 The lowest temperature at which all of the microorganisms in a particular liquid suspension will be killed in 10 minutes is called

- a. Thermal death point
- b. Thermal death time
- c. Decimal reduction time
- d. Decimal reduction point

17 Which one of the following is the BEST advertisement for a disinfectant?

- a. Kills *E. coli*
- b. Kills *Staphylococcus aureus*
- c. Kills *Pseudomonas*
- d. Kills lipophilic viruses

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18 To sterilize heat-labile solutions, one should use

- a. Dry heat
- b. Autoclave
- c. Membrane filtration
- d. Pasteurization

19 The phosphatase test is used to determine whether which one of the following processes was carried out correctly?

- a. Radiation
- b. Filtration
- c. Desiccation
- d. Pasteurization

20 Which of the following methods causes destruction of DNA?

- a. Radiation
- b. Osmotic pressure
- c. Heat
- d. Desiccation

21 Sterilization can be achieved by using

- a. Alcohol
- b. Soap
- c. Chlorine
- d. Ethylene oxide

22 The eradication of non-enveloped viruses CANNOT be achieved by

- a. Chlorine
- b. Ozone
- c. Alcohol
- d. Ethylene oxide

23 Which of the following is NOT used to preserve foods?

- a. Nisin
- b. Sodium nitrite
- c. Potassium sorbate
- d. Biguanides

24 Which of the following is the MOST useful for disinfecting medical instruments?

- a. Quats
- b. Chlorine
- c. Phenol
- d. Benzoic acid

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25 These chemical agents cause a disruption of the plasma membrane and denaturation of enzymes:

- a. Phenolics
- b. Biguanides
- c. Alcohols
- d. Halogens

26 What chemical is used to prevent molds from growing in cheese and soft drinks?

- a. Sorbic acid
- b. Calcium propionate
- c. Sulfur dioxide
- d. Sodium nitrate

27 Which of the following substances are used for surgical hand scrubs?

- a. Chlorohexidine
- b. Glutaraldehyde
- c. Chlorine bleach
- d. Phenol
- e. soap

28 Which of the following is not used to disinfect water?

- a. Chlorine
- b. Heat
- c. Gamma radiation
- d. Copper sulfate
- e. Ozone