Chapter 4 Practice questions

1. What statement is **true** regarding bacterial growth?

a. Bacterial growth refers to the increase in cell size.

b. Bacteria reproduce by a process called sporulation.

c. Bacterial growth refers to an increase in cell population.

d. None of the above.

2. In the lab, you are working with *Escherichia coli* and are planning to grow the bacteria in a test tube in a growth medium overnight for use the next day. What is this type of growth culture called?

a. Continuous culture

b. Inoculation

b. Batch culture

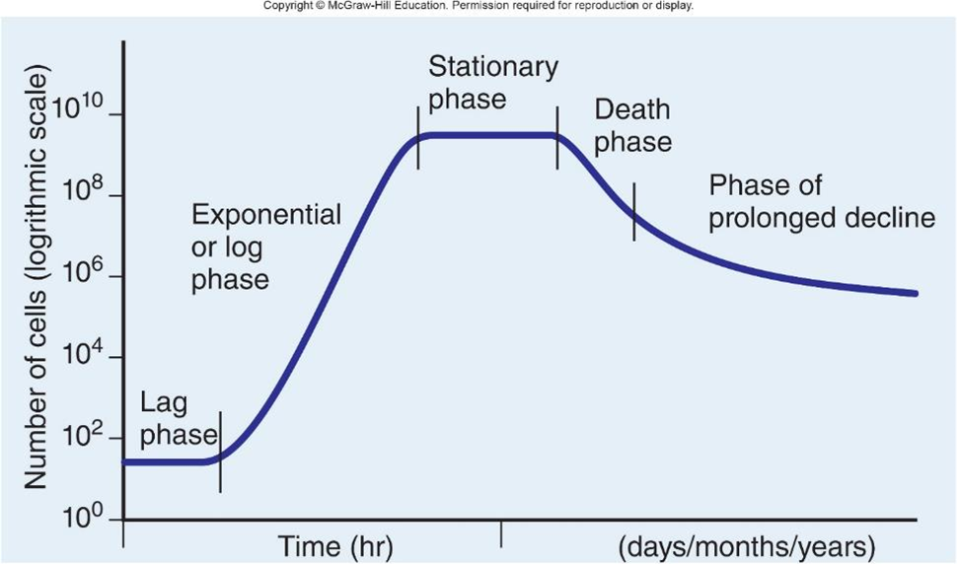
d. Streak plate culture

e. Single colony

3. True or False: The growth curve is representative of a bacterial culture grown in continuous conditions.

a. True

b. False



4. Most bacteria that cause food spoilage in your fridge are caused by which group?

a. Mesophiles

b. Extreme halophiles

c. Alkilophiles

d. Psycrophiles

e. Psycrotrophs

5. What does it mean when we say that *E. coli* grow optimally at 37C?

a. 37C is lowest temperature at which growth occurs for this organism

b. 37C is the highest temperature at which growth occurs for this organism.

c. 37C is the best temperature for growth to occur.

d. 37C is not an ideal growth temperature for this organism.

6. True or False. Heat is used to kill off Psychrotrophs only.

a. True

b. False

7. A microbiological medium was made by adding 30 g of Luria broth and 50 grams of soy protein in 1 litre of water to extract nutrients, agar was added, and then it was sterilized in an autoclave. This medium supports the growth of a wide variety of heterotrophic bacteria, most of which grow into white colonies. Which of the following terms adequately describe this medium?

1. Defined
2. Selective
3. Minimal

d. Undefined

e. More than one of the above.

8. Bismuth sulfite agar used to culture *Salmonella typhi* is considered a:

a. Minimal medium

b. Selective medium

c. Differential medium

d. None of the above.

9. *Streptococcus pyogenes*, the causal agent of strep throat, can be grown on Blood Agar plates, which helps to differentiate what feature?

a. The ability to lyse red blood cells, ie hemolysis

b. The destruction of peptidoglycan

c. The production of antibiotics

d. Two or more of the above

10. True or False. The best way to count viable bacterial cells is through the utilization of a light microscope.

a. True

b. False

11. You have an overnight bacterial culture, and you subsequently dilute the culture 1/1000 and plate 1 ml of this dilution onto a petri dish. The following day you examine the plate and count 50 colonies on the plate. What is the cfu/ml of your original culture?

a. 500, 000 cfu/ml

b. 5, 000 cfu/ml

c. 50, 000 cfu/ml

d. 50 cfu/ml