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What conditions are ideal for most bacteria to grow and reproduce?

18

What methods exist for reducing the chance of bacterial contamination of food?

OPTIONAL SUMMARY OF MODULE 2

Review the vocabulary words listed in question 1 of the study guide.
Fill in the blanks. Many blanks contain more than one word.

1

The term _____ is often used as a general term that applies to all members of kingdom Monera. Some are beneficial to humans, but some are _____, which means they cause disease.

2

Some bacteria have a _____ that surrounds the cell wall. It is composed of an organized layer of sticky sugars that _____. It is also a protective layer that _____.

3

Most bacteria have a _____ that holds the contents of the bacterium together, regulates the amount of water that a bacterium can absorb, and holds the cell into one of three shapes: _____, _____, or _____. The absence or presence of a _____ and its

composition (if it exists) are used to _____ bacteria.

4 Underneath the cell wall (if it exists), there is a _____, which regulates what the bacterium takes in from the outside world.

5 _____ exists throughout the interior of a cell, supporting the DNA and the ribosomes.

6 Many bacteria have fibrous bristles called _____, which are used for grasping. Locomotion is accomplished with a _____.

7 Ribosomes make special chemicals known as _____.

8 In terms of what they eat, most bacteria are d_____. As a result, they are called s_____.

9 Some bacteria are _____, which means they feed on a living host.

10 Autotrophic bacteria manufacture their own food by either _____ (using the energy of the sun to make food) or _____ (promoting chemical reactions that release energy).

11 Some bacteria are _____, which means they need oxygen in order to survive. Some are _____, which means they do not

need oxygen. The latter bacteria either _____ dead organisms or _____ into chemicals that can be used by other life forms.

12 Asexual reproduction in bacteria is often called _____.

13 Typically, a population of bacteria starts off with _____ growth until it reaches a _____ in which bacteria die as quickly as new ones are made. When population growth is controlled by resources, we call it _____. If resources begin to run out, the population will _____.

14 When bacteria exchange genetic information, we call it _____, and it can occur in one of three ways: _____, _____, or _____.

15 In _____, bacteria link together to exchange circular strands of DNA called _____. In _____, a bacterium can absorb a segment of _____ from a non-functional _____. In _____, DNA can be transferred from one bacterium to another by a virus.

16 Bacteria can survive harsh conditions by forming _____.

17 A _____ is really just a simple association of individual bacteria. Bacteria in a streptococcus colony have a _____ shape, while bacteria in a diplobacillus colony have a _____ shape.

18

After a _____, certain bacteria look blue when viewed under a microscope whereas others looked _____.

19

_____ bacteria belong in phylum Gracilicutes, while _____ bacteria belong in phylum Firmicutes. Bacteria with cell walls significantly different from those in these two phyla belong in phylum _____, while bacteria with no cell walls belong in phylum _____.

20

Phylum Gracilicutes has three classes: _____ (non-photosynthetic bacteria), _____ (photosynthetic bacteria that do not produce oxygen), and _____ (photosynthetic bacteria that produce oxygen). Phylum Firmicutes has two classes: _____ (cocci and bacilli bacteria) and _____ (bacteria of any other shape). Phylum Tenericutes has only one class: _____. Phylum Mendosicutes has only one class: _____. Many places that are uninhabitable to other organisms will be populated with members of class _____.

21

Photosynthetic organisms called blue-green algae are more properly called _____.

22

Clostridium botulinum can cause _____. Undercooked eggs and poultry can give you _____ poisoning. *Escherichia coli* bacteria live in your gut. There are pathogenic _____ and non-pathogenic _____ of this bacterium.

23

For optimum growth, most bacteria need _____,
_____, _____,
and _____.

24

Label all of the indicated structures on the bacterium below.

