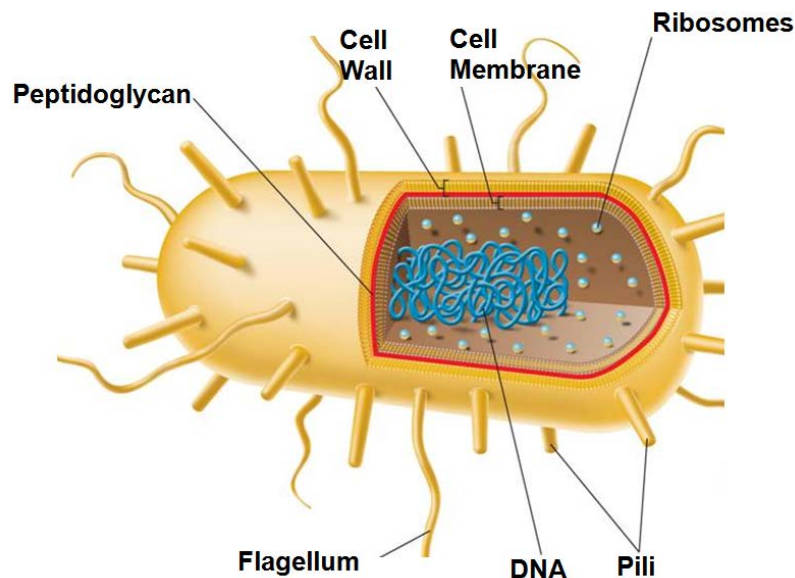1. True or false?

   a) Prokaryotes are unicellular organisms that lack a nucleus. ___True____

   b) Archaebacteria is the larger of the two kingdoms of prokaryotes. __False__

   c) Archaebacteria genes are more like those of eukaryotes than those of eubacteria. ___True__

2. What is the different between cell walls of eubacteria and archaebacteria?

Archaebacteria do not contain a peptidoglycan like eubacteria.

3. Identify the pointed structures of *E. coli*, a typical Eubacteria found in human intestine.

4. Eubacteria include organisms that live in a variety of environments. Give three examples.

1. in fresh and salt water
2. on land
3. on and within the human body

5. Many archaebacteria live in extreme environments. Give two examples of environments where they live.

1. Oxygen free environments, such as thick mud and animal digestive tracts.
2. Salty environments
3. Hot springs where water temperatures approach the boiling point.

6. Give the four characteristics that permit to identify prokaryotes.

1. Shape
2. The chemical nature of their cell walls
3. the way they move
4. the way they obtain energy

7. By looking at their shape, identify these prokaryotes.

a) Spirilla   b) Cocci

c) Bacilli

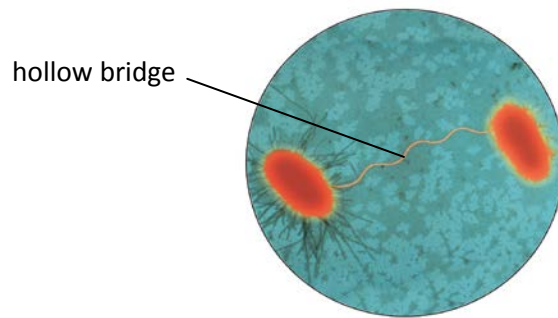8. Define Gram-positive and Gram-negative bacteria.

Gram-positive : have thick cell walls with large amounts of peptidoglycan.

Gram negative : have thinner cell walls inside an outer lipid layer.

9. Complete the sentences:
   a) __Obligate aerobes__ require a constant supply of oxygen.
   b)Bacteria that live without oxygen because they may be killed by it are called _obligate anaerobes_.
   c)Bacteria that can survive with or without oxygen are known as _facultative anaerobes_.

10. Schematize the conjugation reproduction, and identify the hollow bridge.

hollow bridge

11. Complete the sentences :

a) producers that capture energy by photosynthesis.

b) Many plants have symbiotic relationships with nitrogen-fixing bacteria in their roots.

c) Others are decomposers/saprophytes that break down the nutrients in dead matter.