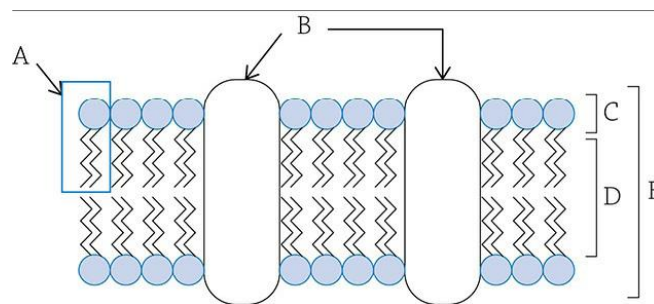


TD n°2

REVIEW QUESTIONS

1. The main structural component of the cell membrane is the [name the molecule].
2. Label the following diagram (A-E) of a cell membrane with the following terms: **hydrophilic phosphate group**, **phospholipid bilayer**, **protein**, **phospholipid**, **hydrophobic tails**.



3. Why would transmembrane proteins (also called integral proteins) be useful in transport of things into and out of the cell?
4. Which cell type is smaller and lacks organelles?
5. Life is defined by a number of characteristics: list the eight characteristics of life covered in the chapter.
6. Choose the correct term: If a cell lived in very hot conditions (such as a volcanic deep-sea vent), its phospholipids would be composed of more **unsaturated/saturated** fatty acids in order to prevent the cell membrane from becoming too fluid.
7. List three possible roles for cell membrane proteins, and provide a brief description of each.
8. For each of the following, indicate whether it is found in a bacterial cell. Write Y if it is found in prokaryotes, and N if it is not found in prokaryotes:
 - a. Cell membrane
 - b. Nucleus
 - c. Flagella

- d. DNA
- e. Cell wall
- f. Ribosomes
- g. Mitochondrion (an organelle)
- h. Nucleoid

9. What is an advantage to prokaryotic cells' simplicity?

10. For the following multiple-choice question, choose the best answer. Which of the following is the smallest thing that could be considered alive?

- a. An atom
- b. A molecule
- c. A virus
- d. An amoeba
- e. A tree

11. How is a cell able to maintain internal conditions different from its surroundings?