

1. How are phospholipid molecules arranged within the lipid bilayer of the plasma membrane? (ECF=extracellular fluid; ICF=intracellular fluid)
- A. Phospholipid molecules are arranged randomly.
 - B. The polar lipid tails are oriented toward the ECF and the ICF because they are hydrophobic.
 - C. The polar phosphate heads are oriented toward the interior of the lipid bilayer because they are hydrophobic.
 - D. The nonpolar lipid tails line up in the center of the membrane lipid bilayer because they are hydrophobic.
 - E. The nonpolar phosphate heads are oriented toward the ECF and ICF because they are hydrophobic.
2. Which of the following constituents of the plasma membrane serve as specific biological markers for cell- to-cell recognition?
- A. Phospholipids
 - B. Cholesterol
 - C. Integral enzymes
 - D. Integral receptors
 - E. External glycocalyx
3. Which of the following crosses the plasma membrane by simple diffusion?
- A. Peptides
 - B. Glucose
 - C. Carbon dioxide (CO₂)
 - D. Proteins
 - E. None of the above
4. Which of the following does NOT traverse the plasma membrane by simple diffusion?
- A. Urea
 - B. Oxygen (O₂)
 - C. Amino acids
 - D. CO₂
 - E. None of the above
5. Which of the following is a characteristic of facilitated diffusion?
- A. Movement of solute through the membrane by a carrier protein down the concentration gradient
 - B. Movement of solute through the membrane by a carrier protein against the concentration gradient
 - C. Direct passage of solute through the membrane down the concentration gradient
 - D. ATP-requiring
 - E. Cannot be saturated
6. Which of the following statements is true about the plasma membrane?
- A. It contains a double layer of phospholipids whose hydrophobic regions are found on the surface of the membrane.
 - B. The main function of phospholipids is to transport substances through the plasma membrane.
 - C. The main function of cholesterol is to increase membrane stability and fluidity.
 - D. The main function of integrated proteins is to make the plasma membrane fluid.
 - E. The glycocalyx covers the internal surface of the plasma membrane, and its main function is to fix the plasma membrane to the cytoskeleton.