

1. Explain **concentration gradient** and **diffusion** with a picture or diagram. Also write a real-life example of **diffusion**.


2. Discuss the similarities and differences between **diffusion** and **osmosis**.

3. What would happen to a cell if placed in the following solutions (describe and illustrate).
 - a. **Isotonic** solution:

 - b. **Hypotonic** solution:

 - c. **Hypertonic** solution:

4. Draw an arrow in the direction of **osmosis** for each of the conditions below. Assume the membrane is not **permeable** to sucrose.

5. Intravenous solutions 
 4. Given appropriate information concerning concentration differences and membrane permeability to solutes, be able to determine which way solutes or water will passively move through a differentially permeable membrane.

References:

Human Anatomy & Physiology, 7th edition, Marieb and Hoehn, pp 70-81.

Anatomy and Physiology I Laboratory Manual

Osmosis and Diffusion Worksheet, pp. 19-20.

PhysioEx: Cell Transport Mechanisms and Permeability pp. 21-26

PhysioEx: Cell Transport Mechanisms and Permeability Worksheet,
pp. 27-28.