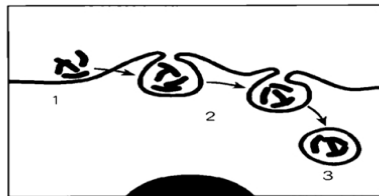


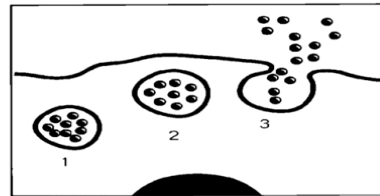
Cell Transport Worksheet **ANSWER ON YOUR OWN PAPER**

(pp 96-106)

1. Explain **concentration gradient** and **diffusion** with a picture or diagram. Also describe an example of **diffusion**.
2. Discuss the similarities and differences between **diffusion** and **osmosis**.
3. What would happen to a red blood cell if placed in the following solutions (describe and illustrate).
  - a. **Isotonic** solution:
  - b. **Hypotonic** solution:
  - c. **Hypertonic** solution:
4. Intravenous solutions must be prepared so that they are **isotonic** to red blood cells. A 0.9 % salt solution is **isotonic** to red blood cells.
  - a. Illustrate and Explain what will happen to a red blood cell placed in a solution of 99.3% water and 0.7% salt.
  - b. Illustrate and Explain what would happen to a red blood cell placed in a solution of 90% water and 10% salt.
5. Draw and describe a plant cell experiencing turgor pressure. What type of a solution (hypo, hyper, iso) would cause turgor pressure?
6. What is required for active transport to occur?
7. In the Na<sup>+</sup> K<sup>+</sup> pump, sodium ions are exchanged for potassium ions at a \_\_\_\_\_ to \_\_\_\_\_ ratio.
8. Explain how the Na<sup>+</sup> K<sup>+</sup> pump affects the electrical gradient across the membrane, and why this is important to nerve cells.
9. The prefix exo- means “out of” and the prefix endo- means “taking in”. How do these meanings relate to the meaning of exocytosis and endocytosis?



A



B

10. What process is shown in Figure A? \_\_\_\_\_
11. What process is shown in Figure B? \_\_\_\_\_
12. Name & describe the 2 types of endocytosis.