**Passive & Active Transport** (p. 74 – 83)

**I. Diffusion**

 **1. Define the term passive transport.**

 Passive Transport –

 **2. Differentiate between a concentration gradient and equilibrium.**

 Concentration Gradient : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Equilibrium : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 **3. Define the term diffusion.**

 Diffusion –

 **4. What are two types of substances that can passively diffuse across a cell membrane?**

 1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**II. Osmosis**

 **1. Define the term osmosis.**

 Osmosis –

 **2. Water diffuses from a lower concentration to a higher concentration.**

 Circle One : True False

 **3. Complete the table.**

|  |  |  |  |
| --- | --- | --- | --- |
| **Fluid Outside Cell** |  **Outside Solution** |  **Water Movement** |  **Result** |
|  Lower Water Concentration |  |  |  Cell Shrinks |
|  Higher Water Concentration |  |  Into Cell |  |
|  |  Isotonic |  In & Out at  Equal Rates |  |

 **4. How do contractile vacuoles reduce swelling effects due to hypotonic solutions?**

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**III. Crossing The Membrane**

 **1. Define the term ion channel.**

 Ion Channel –

 **2. List four common ions transported through ion channels.**

 1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 4. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 **3. The inside of a cell is typically more positively-charged than the outside solution.**

 Circle One : True False

 **4. Define the term facilitated diffusion.**

 Facilitated Diffusion –

 **5. List three types of substances transported through facilitated diffusion.** (Not in the book.)

 1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**IV. Movement Against A Concentration Gradient** *(Primary Transport)*

 **1. Define the term active transport.**

 Active Transport –

 **2. Active transport requires the usage of ATP energy.**

 Circle One : True False

 **3. Describe how a sodium-potassium pump operates across a cell membrane.**

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**V. Movement In Vesicles** *(Secondary Transport)*

 **1. Differentiate between endocytosis and exocytosis.**

 Endocytosis : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Exocytosis : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_