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Cell Signalling

Roles of Cell Membranes

- 1
- 2
- 3
- 4
- 5



Cell Signalling

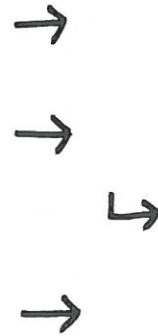
-
- ① →
- ② →
- ③ →
- ④ →



Cell-Surface Membranes



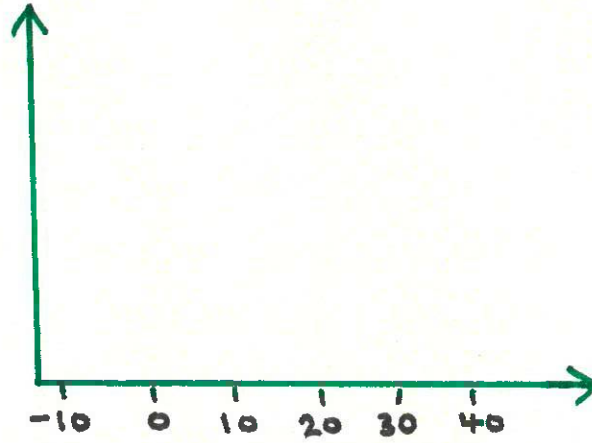
Cholesterol



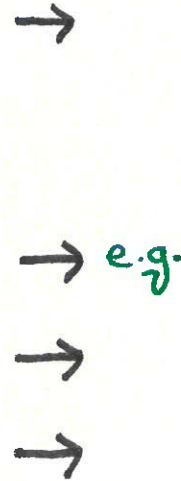
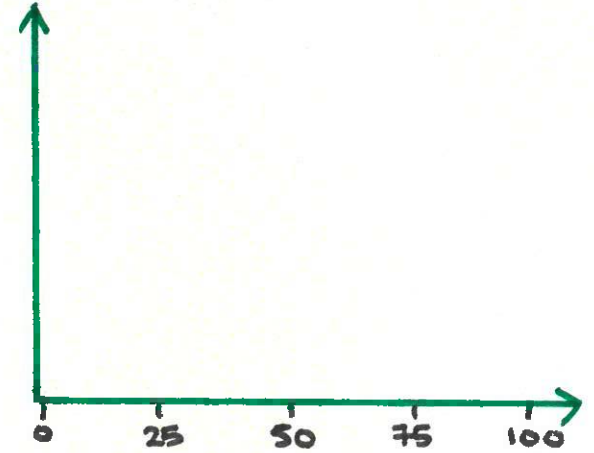


Factors Affecting Membrane Permeability 1 2 3 4 5

Temperature



Solvents





Transport Across Membranes - Diffusion



① Concentration Gradient



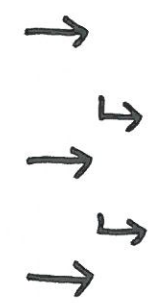
② Diffusion Distance



③ Surface Area



Exam Question





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Transport Across Membranes: Facilitated Diffusion

- 1
- 2
- 3
- 4
- 5

Facilitated
Diffusion

Active Transport



Protein Channels

Carrier Proteins



Both





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Transport Across Membranes: Active Transport & Co-Transport 1 2 3 4 5

Active Transport



Co-Transport



Exocytosis

Transport Across Membranes: Exocytosis & Endocytosis

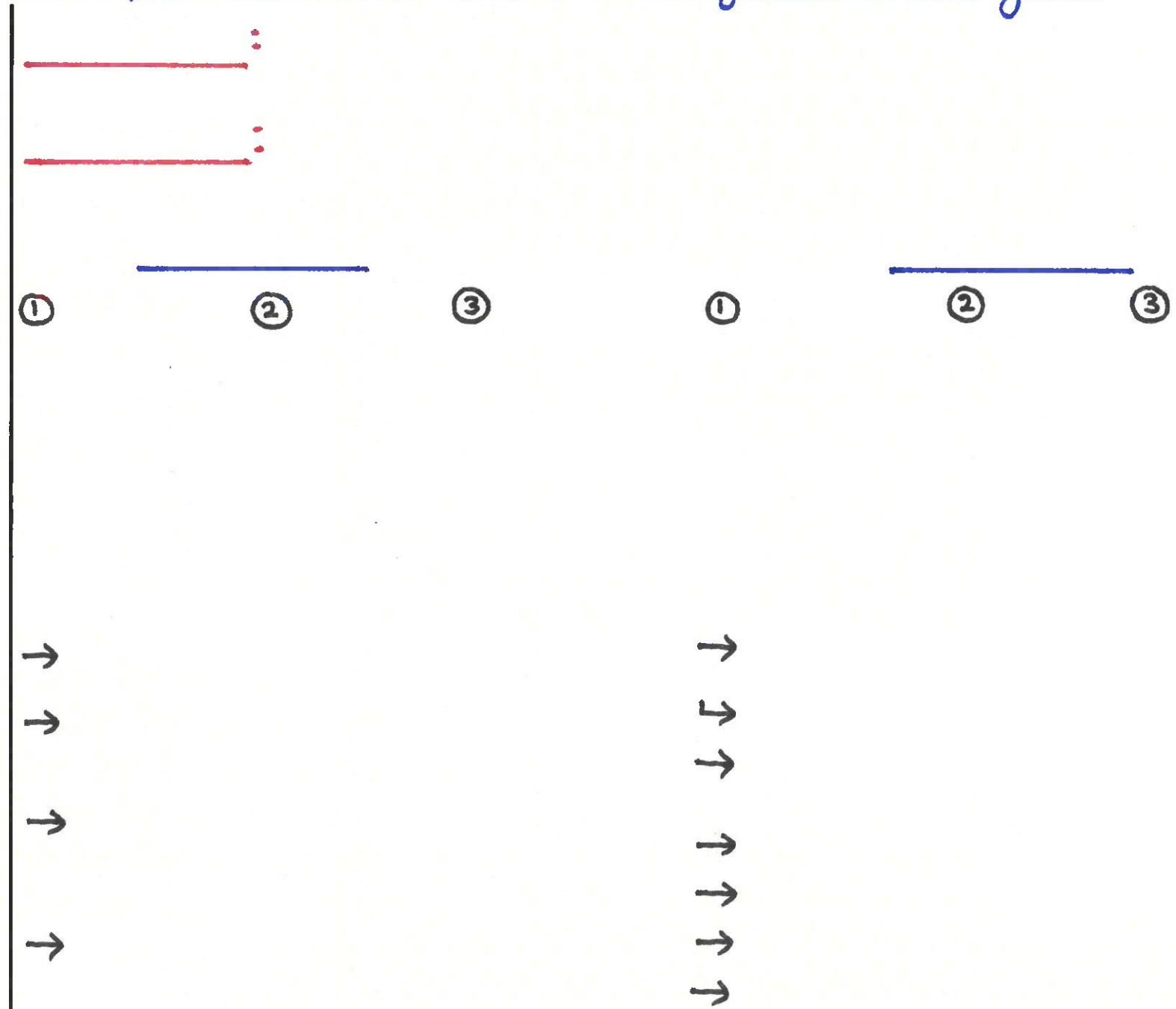
1

2

3

4

5



Endocytosis



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Osmosis

Transport Across Membranes - Osmosis

- 1
- 2
- 3
- 4
- 5

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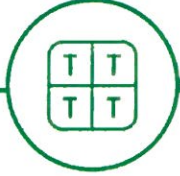
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High water potential

Low water potential

Exam Question

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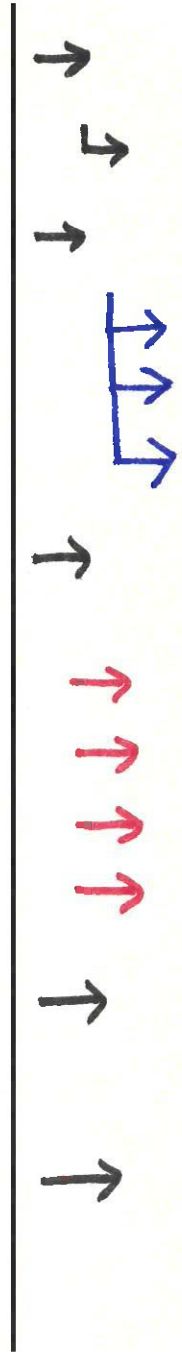


TT TOP TIP

Water potential is opposite to solute concentration



Diffusion Rates in Model Cells



Example





Investigating Permeability of Cell Membranes

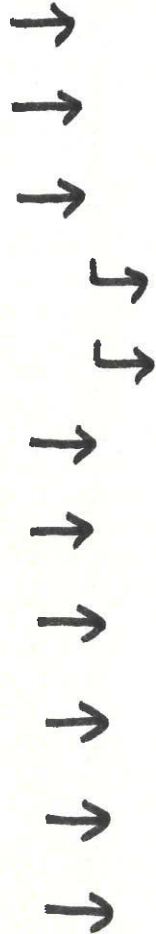
1

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Hypertonic

Effect of Osmosis on Plant & Animal Cells

1

2

3

4

5

Isotonic

Hypotonic

