**Transport in Vascular Plants**

Ch 36

**Review**:

 Membrane selectively

 Passive transport:

 Transport protein:

 Facilitated diffusion:

 Active transport:

 Chemiosmosis:

**Overview of transport**: **Fig 36.2**

Proton pump:

 Membrane potential:

Cotransport

 **(Fig 36.4)**

**Water potential**:

 Osmosis:

 Water potential:

 Solute potential:

 Pressure potential:

**(Fig 36.5)** & **(Fig 36.6)**

 Plasmolysis:

 Turgor pressure:

 Aquaproin protein: 

**Vacuolated plant cells**: **(Fig 36.8 a)**

 Central vacuole:

 Tonoplast:

 Symplast:

 Plasmodesmata:

 Apoplast:

**Transport over short distance**: **(Fig 36.8 b)**

Transmembrane route:

 Apoplastic route:

 Symplastic route:

**Long distance transport**: **(Fig 36.2)**

 Bulk flow:

**Absorption of water & minerals**:

 **(Fig 36.9)**

 Epidermal cells

 Mycorrhizal fungi:

 Endodermis**:**

 Casparian strip:

**Roots to Leaves**:

 Transpiration:

 Guttation:

**Transpiration-Cohesion-Tension Mechanism**

 **(Fig 36.12)**

**Cohesion / Adhesion**

 **(Fig 36.13)**

 Cohesion:

 Adhesion:

**Stomata**:

 Gas exchange:

 Control water loss:

 **(Fig 36.15)**

 Guard cells:

 Stimuli to open stomata

**Movement of Sugar**:

 Phloem sap:

 Sugar source:

 Sugar sink:

 Direction of flow in phloem

 **(Fig 36.18)**

 **(Fig 36.19)**

Plant cell - plasmodesmata



Plasmodesmata



Plasmodesmata



Water transport into the root.

