

## 2.B-C Exam Expectations

- LIST the types of macromolecules that can be found in a plasma membrane
- OUTLINE glycoproteins and glycolipids
- OUTLINE the concept of “a chain being only as strong as its weakest link”
- OUTLINE how water is able to move rapidly through plasma membranes
- OUTLINE characteristics of molecules that determine their ability to diffuse across plasma membranes
- OUTLINE the route of flow (for a protein or lipid) through the endomembrane system
- OUTLINE the functions of cellular organelles (limit to those in the powerpoint)
- OUTLINE homeostasis
- OUTLINE aquaporins
- OUTLINE the terms hypotonic, isotonic and hypertonic
- OUTLINE the process by which white blood cells eliminate bacteria and foreign particles
- DESCRIBE the overall structure & function of plasma membranes
- DESCRIBE the individual structure(s) & function(s) that make up a plasma membrane
- COMPARE the ideal extracellular environment (tonicity) between animal and plant cells
- COMPARE active and passive transport
- COMPARE osmosis, diffusion, chemiosmosis and facilitated diffusion
- COMPARE endocytosis, exocytosis, phagocytosis and pinocytosis
- COMPARE the types of membrane transport utilized by cells with and without cell walls
- COMPARE prokaryotic and eukaryotic cells
- COMPARE negative and positive feedback loops
- SUGGEST reason(s) for the evolution of photoperiods among plants
- EXPLAIN the freeze fracture used to study cell membranes
- EXPLAIN the selectively permeable characteristics associated with plasma membranes
- EXPLAIN the body's regulation of blood glucose levels
- EXPLAIN migratory behavior
- DEDUCE a cell's tonicity from its response to soaking in solutions with different tonicity
- DEDUCE a type of feedback loop when given an example of a particular regulatory process in the body
- DEDUCE whether a plant is a short-day or long-day plant given information about flowering under different conditions
- PREDICT the outcome(s) of giving a patient an intravenous saline solution with a tonicity different from that of the patient's blood
- EVALUATE molecules or atoms and determine which are likely to pass through plasma membranes
- EVALUATE % change of mass in dialysis bags to determine past, present or future tonicity of the bags themselves or the solution in which they are submerged