37. Facilitated diffusion through a biological membrane is:

a. driven by a difference in solute concentrations
b. driven by ATP
c. endothermic
d. generally irreversible
e. not specific with regard to substrate

38. The specificity of the potassium channel for K^+ over Na^+ is mainly the result of the:

a. differential interaction of the selectivity filter of the protein
b. hydrophobicity of the channel
c. phospholipid composition of the channel
d. presence of carbohydrates in the channel
e. presence of cholesterol in the channel

39. The following data was obtained for the transport glucose into rat hepatocytes. Determine the K_T and V_{max}.

[glucose] mM	(μ moles/sec) / mg cell protein
0.05	0.0286
0.1	0.0425
0.2	0.057
1	0.077

40. The type of membrane transport that uses ion gradients as the energy source is:

a. facilitated diffusion
b. passive transport
c. primary active transport
d. secondary active transport
e. simple diffusion

41. In examining arginine transport in certain bacterial membranes, it was found that lysine could inhibit arginine uptake (transport) by 50%, and conversely arginine could inhibit lysine uptake (transport) by 50%. This means these bacteria have at least ___ transporters for these molecules.

a. 1
b. 2
c. 3
d. 4
e. zero, these get in through osmosis