The solution in the two arms of the U-Tube (on the next slide) are separated at the bottom of the tube by a selectively permeable membrane. At the beginning of the experiment, the volumes in both arms area the same, and the level of the liquid is therefore the same height. The membrane is permeable to water and to sodium chloride, but not to glucose. The apparatus is allowed to stand for three days. Choose the following options below for each of the questions 1-4 to move up to escape the cell!!!!

Both the statement and the reason are correct

The statement is correct, but the reason is ir The statement is incorrect, but the reason is Both the statement and the reason are incor



A · -B-... C----D-... E٠ F..... H G---K _ · -M--0---P. _ _. R . - . U ··· -S X----V···-2...---5..... 7 - - . . .

Q1. The source concentrated and Side Y will be less concentrated

Q2. The concentrations of the glucose solutions on sides X & Y will remain unchanged because the membrane is impermeable to glucose and so glucose cannot diffuse from one side to the other.

Q3. Water molecules will have a net movement from side X to side Y, because water molecules move from regions of higher to regions of lower concentrations.

Q4. The fluid on side X will rise, because the solution in side X had lower water concentrations that the solution in side Y.

Choose the following options below for each of the questions 1-4 to move up to escape the cell!!

Both the statement and the reason are correct.

The statement is correct, but the reason is incorrect.

The statement is incorrect, but the reason is a fact or a principle.

Both the statement and the reason are incorrect.

Q1. The sodium chloride solution on Side X will become more concentrated while Side Y will become less concentrated *because* a substance tends to diffuse from regions of lower concentration to regions of higher concentration of that substance.

Q2. The concentrations of the glucose solutions on Sides X & Y will remain unchanged *because* the membrane is impermeable to glucose and so glucose cannot diffuse from one side to the other.

Q3. Water molecule will have a net movement from Side X to Side Y, *because* water molecules move from regions of higher to regions of lower concentration.

Q4. The fluid on Side X will rise because the solution in Side X had lower water concentration than the solution in Side Y.



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