

**Sample Exam Questions: Membrane
Transport**

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Answers at end

1] If cells are placed in a hypertonic solution containing a solute to which the membrane is impermeable, what could happen?

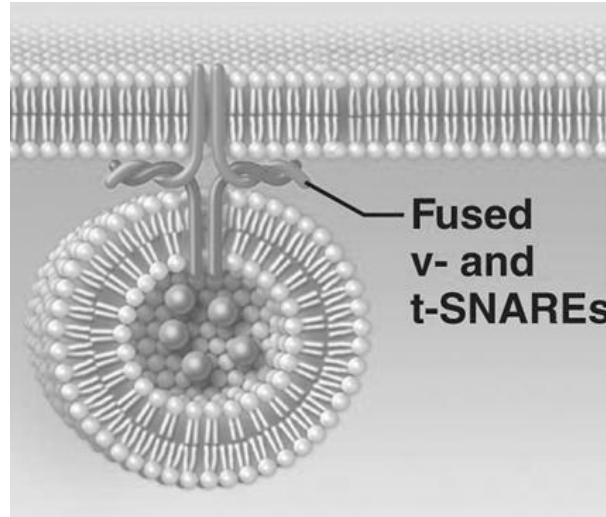
- A) The cells will swell and ultimately burst.
- B) The cells will lose water and shrink.
- C) The cells will shrink at first, but will later reach equilibrium with the surrounding solution and return to their original condition.
- D) The cells will show no change due to diffusion of both solute and solvent.
- E) The cell membrane will gradually come apart

2] *Cancerous cells* can divide so rapidly that they will often produce a glycocalyx that is different than the other cells in the body. This may result in _____.

- A) immune system cells not recognizing the cancer cells as foreign and hence not destroying them
- B) the cancer cells conserving energy for more growth
- C) the cancer cells invading surrounding tissue
- D) a decrease in the permeability of the tumor cell's plasma membrane preventing the uptake of chemotherapy drugs
- E) the cancer cells moving freely through the blood system

3] All of the following are TRUE regarding the v-SNAREs and t-SNAREs shown, except which one?

- A) they participate in passive membrane transport
- B) they are involved in exocytosis
- C) they are transmembrane proteins
- D) they assist with an intracellular 'docking process'
- E) they play a role in neurotransmitter release



ANSWERS

1 – B

2 – A

3 – A