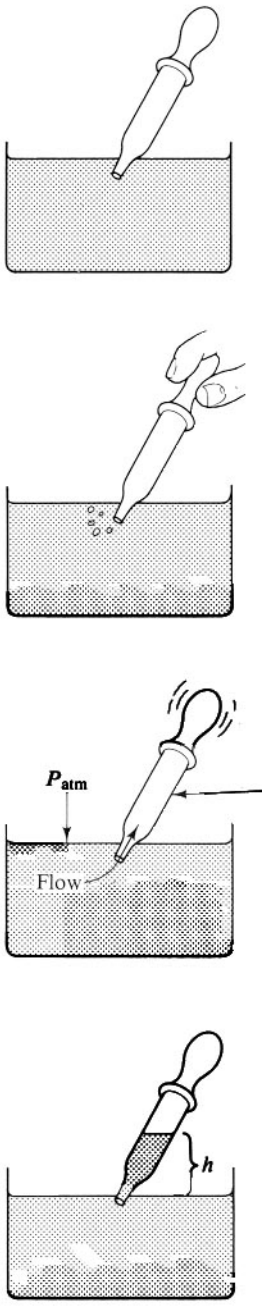
UNIT 11 PRETEST

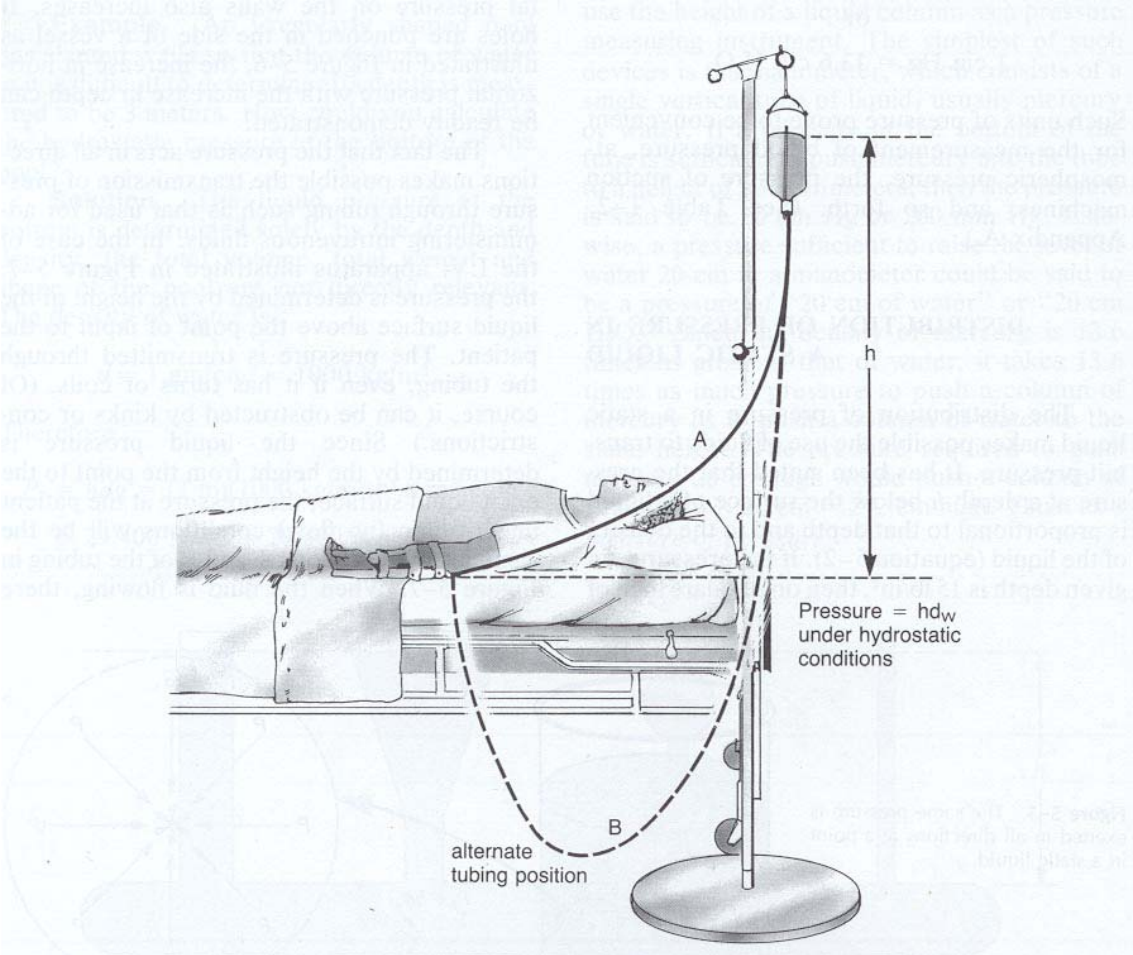
1) The following is a series of pictures illustrating the sequence of events involved in filling an eyedropper with fluid. Explain why the eyedropper fills with fluid.



(from *Physics with Health Science Applications* by Paul Peter Urone, John Wiley and Sons, NY, 1986)

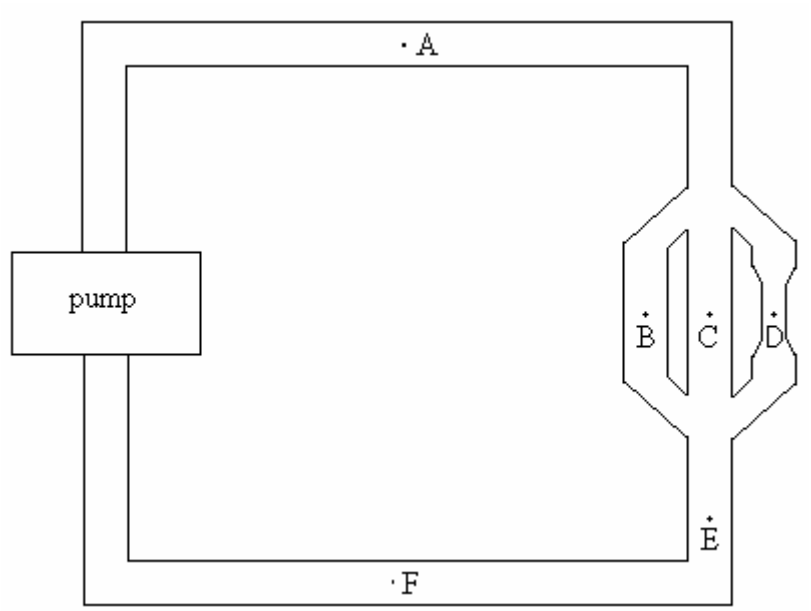
2) When you go to a doctor, it is common to measure your blood pressure. Usually the blood pressure in your arm is measured. Is your blood pressure the same in all parts of your body? Explain. What could cause blood pressure to rise? Explain.

3) In the picture below, does the height of the bag containing the intravenous fluids matter? Explain your reasoning.



(from *Phyiscs for the Health Sciences 3rd edition* by Nave and Nave, W. B. Saunders Company, Philadelphia, 1985)

4) Consider the following arrangement of water pipes and a pump. The system is vertical, as drawn. The system is filled with water and then the pump is turned on.



(a) Rank the water pressure at points A through F. Explain your reasoning. Is the pressure the same at all points? Where is the pressure highest? Where is it lowest? Explain your reasoning. If you cannot rank the pressure at some of the points explain why you cannot rank them.

(b) Rank the water flow rate at points A through F. Explain your reasoning. Is the flow rate the same at all points? Where is the flow rate highest? Where is it lowest? Explain your reasoning. If you cannot rank the flow rates at some of the points explain why you cannot rank them.

(c) Rank the water velocity at points A through F. Explain your reasoning. Is the velocity the same at all points? Where is the velocity highest? Where is it lowest? Explain your reasoning. If you cannot rank the velocity at some of the points explain why you cannot rank them.