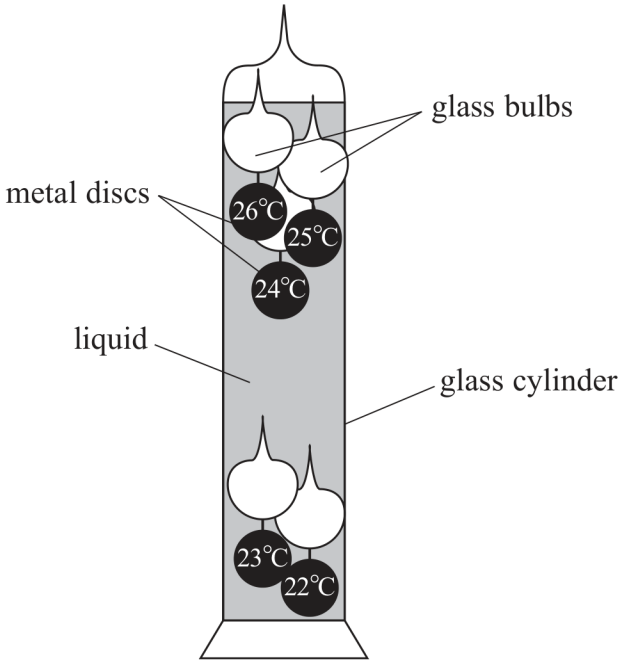
***15** A Galilean thermometer consists of a closed glass cylinder containing a liquid. In the liquid there are several identical sealed glass bulbs, as shown. Attached to each bulb is a metal disc labelled with a temperature. Each disc has a different mass.



As the temperature increases, the density of the liquid decreases. This can cause the bulbs to move within the liquid.

Explain why a particular bulb will float until the temperature of the liquid exceeds a certain value.

(Total for Question 15 = 6 marks)

DO NOT WRITE IN THIS AREA