Answer on Question #52079-Physics-Field Theory

The absolute zero temperature refers to the temperature at which

pure ice, water and water vapour at normal atmospheric pressure are in equilibrium

theoretically all thermal motions will cease

pure ice melts at normal atmospheric pressure

pure ice ecomes steam at atmospheric pressure

Answer: theoretically all thermal motions will cease.

8 Tin melts at 232 under standard atmospheric pressure. Express this temperature in kelvin

449.16K

505.15K

60.91K

96.19K

Solution

$$T = (232 + 273.15)K = 505.15\ K.$$

Answer: 505.15K.

9 An ungraduated mercury thermometer attached to a millimeter scale reads 22.8mm in ice and 242mm in steam at standard pressure. What will the millimeter read when the temperature is 20^{o} C?

66.64mm

43.84mm

219.20mm

34.54mm

Solution

$$h = h_1 + \frac{h_2 - h}{t_2 - t_1}(t - t_1) = 22.8 + \frac{242 - 22.8}{100 - 0}(20 - 0) = 66.64\ mm.$$

Answer: 66.64mm.

10 Two bodies may be said to be in thermal equilibrium if

the bodies are thermally insulated from one another

the bodies are not in thermal equilibrium with another body

if one body loses heat to the other

if there not net flow of heat between the two bodies two bodies in thermal contact

Answer: If there not net flow of heat between the two bodies two bodies in thermal contact.