K Education Centre

GCSE Physics Particles P6

Molecules and Matter

Assignment Questions

P6 : Molecules and Matter

Q1: What is density?

Q2 : A measuring cylinder contained a volume of 100 cm^3 of a particular liquid. The liquid was then poured into an empty beaker of mass 51 g. The total mass of the beaker and the liquid was then found to be 145 g.

a) Calculate the mass of the liquid in grams
b) Calculate the density of the liquid in kg/m^3

Q3 : Describe the changes of states of matter.

Q4: Explain using the kinetic theory of matter, why liquid and solids are denser than the gases.

Q5: Draw the temperature – time graph for changing of state of ice into water vapor.

Q6 : A pure solid is heated in a tube and its temperature was measured every 30 seconds. Measurements are plotted in the table below.

Time in s	0	30	60	90	120	150	180	210
Temp in ^0C	20	35	49	61	61	61	71	79

a) Plot a graph for of temperature against time
b) Use your graph to find the melting point of the solid.

Q7: In terms of internal energy explain the effect of temperature on solid, liquids and gases. Why pressure of the gas increases with increase in temperature?

Q8: What is Latent heat of fusion and Latent heat of vaporisation?

Q9 : Estimate how long a 2500 W electric kettle would take to boil away 250 g of water. Specific latent heat of vaporisation of water is 2.25MJ/kg