

SIMPLE CLASSIFICATION OF SUBSTANCES

MARKING SCHEME

1. (a) (i) particles gaining kinetic energy, temperature increasing. (1mk)
(ii) Particles rearranging themselves as they change from liquid to gas and all the heat supplied used for this rearrangement and no temperature rise occurs. (1mk)
(b) Melting point of naphthalene (1mk)

2. $\left(\frac{1}{4} \times 16\right) + \left(\frac{3}{4} \times 18\right)$ (1mk) = 4 + 13.5 = 17.5 (1mk)

3.

- (a) P= Sublimation // sublimate formation (1 mark)
R= Solidification //freezing (1mark)
(b) Exothermic (½ mark)
Slowing down particles release their kinetic energy as the gas condenses to liquid (½ mark)

4. a) Cooling curve ✓ 1
b) BC ✓ 1
c) The kinetic energy ✓ ½ of the molecules decrease as heat energy is lost ✓ ½ to the surrounding leading to a drop / decrease in temperature.