**Properties of Matter**

**Multiple Choice**

1 – A

2 – A

3 – B

4 – D

5 – B

6 – C

7 – A

8 – B

9 – D

10 – B

**Section 2**

1 a) E = Pt (1) = 15 x 10 x 60 (1) = 9000J. Must state answer or (1) max.

b) (i) X (1) (ii) c = Eh/mΔT (1) = 9000/(1 x 10) (1) = 900 Jkg-1°C-1 (1)

c)(i) Insulate block, put heater in fully etc (1) (ii) Final T would **increase** (1)

2 OEQ. No understanding (0) Limited (1) Reasonable (2) Good (3)

3 a) Eh = cmΔT (1) = 4180 x 6 x 25 (1) = 627000 J. Need final answer or (1) max.

b)(i) t = Eh/P (1) = 627000/1800 (1) = 348s (1) (ii) Heat lost to environment/machine. (1)

4 a) P1V1 = P2V2 (1) P2 = (1 x 105 x 4 x 10-4)/1.6 x 10-4 (1) = 2.5 x 105 Pa (1)

b) Pressure rises (1) as particles hit sides more frequently (1), greater force per unit area (1)

c)

P

V