## Topic 04. Thermal Physics

- 1. 122 kJ (\* the answer may slightly vary depending on the values for the specific heat capacitances and heats you consider in the reference tables)
- 2. 0.26 kg
- 3. (a) 0.0388 mol; (b)  $220^{\circ}\text{C}$
- $4.~25~\mathrm{molecules/cm^3}$
- 5. (a) 2.00 atm; (b) 333 J; (c) 0.961 atm; (d) 236 J
- 6. (a)  $3.00 \times 10^3$  J; (b)  $-2.97 \times 10^{-2}$  m<sup>3</sup>.