

- 13** Thermal energy is supplied to 5.00 kg of water at 30.0 °C. All of this water becomes steam at 100 °C. There is no heat loss to the surroundings.

Specific heat capacity of water = 4190 J kg⁻¹ K⁻¹.

Specific latent heat of vaporisation of water = 2260 kJ kg⁻¹.

How much thermal energy is supplied to the water?

- A** 1.48×10^6 J
- B** 3.73×10^6 J
- C** 1.13×10^7 J
- D** 1.28×10^7 J

- 14** A cylinder of an ideal gas, at rest on the Earth's surface, has an internal energy of 2.0 kJ. The