

- 12** Object P is made from steel and has a mass of 0.90 kg. Object Q is also made from steel and has a mass of 0.60 kg.

P and Q are in contact with each other and are in thermal equilibrium. P and Q are thermally insulated from their surroundings.

Which statement is correct?

- A** P and Q have the same internal energy.
- B** P is at a higher temperature than Q.
- C** There is no net transfer of energy between P and Q.
- D** The specific heat capacity of P is greater than that of Q.

- 13** The variation of the product (pressure  $\times$  volume) with temperature for a fixed amount of ideal gas is