10   A fixed mass of ideal monoatomic gas at low temperature is trapped in a container at constant pressure. The gas is then heated and the volume of the container changes so that the pressure stays at 1.00×10^5 Pa. When the gas reaches a temperature of 0.0 °C, the volume is 2.20×10^{-3} m^3.

What is the total internal energy of the gas at a temperature of 50.0 °C?

A   60 J

B   130 J

C   330 J

D   390 J