

14 A canister of an ideal gas, at rest on the Earth's surface, has an internal energy of 3.0 kJ. The canister is then thrown upwards to a point X where the potential energy of the gas has increased by 0.5 kJ and its kinetic energy is 1.0 kJ. There is no heat transfer or work done on the ideal gas.

What is the internal energy of the gas when it is at point X?

A 2.5 kJ

B 3.0 kJ

C 4.0 kJ

D 4.5 kJ

15 A particle oscillates with simple harmonic motion. The graph shows the variation with time t of