

- 2 (a) State what is meant by the *internal energy* of a system.

.....
.....
.....
..... [2]

- (b) By reference to intermolecular forces, explain why the change in internal energy of an ideal gas is equal to the change in total kinetic energy of its molecules.

.....
.....
..... [2]

- (c) State and explain the change, if any, in the internal energy of a solid metal ball as it falls under gravity in a vacuum.

.....
.....
.....
..... [3]