

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

.....
.....
.....

[2]

- (b) Explain, by reference to work done and heating, whether the internal energy of the following increases, decreases or remains constant:

- (i) the gas in a toy balloon when the balloon bursts suddenly,

.....
.....
.....

[3]

- (ii) ice melting at constant temperature and at atmospheric pressure to form water that is more dense than the ice.

.....
.....
.....

[3]

[Total: 8]