

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

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.....[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,

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

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.....[3]

[Total: 8]