

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

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..... [2]

(b) State and explain qualitatively the change, if any, in the internal energy of the following systems:

(i) a lump of ice at 0°C melts to form liquid water at 0°C ,

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..... [3]

(ii) a cylinder containing gas at constant volume is in sunlight so that its temperature rises from 25°C to 35°C .

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..... [3]