

- 3 (a) State the meaning of the term *internal energy* of a system.

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.....[2]

- (b) An ideal gas undergoes a cycle of changes $A \rightarrow B \rightarrow C \rightarrow A$, as shown in Fig. 3.1.

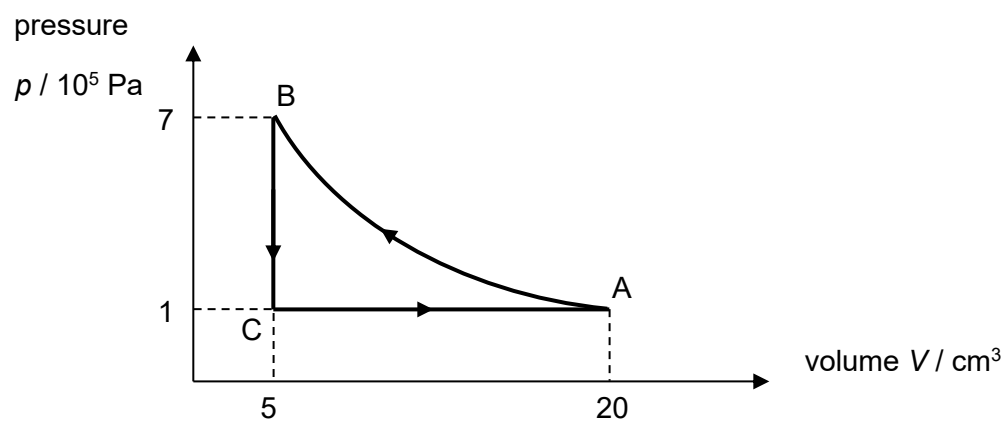


Fig. 3.1

- (i) Calculate the work done by the gas during the change $C \rightarrow A$.

work done by gas = J [2]

(ii) Fig 3.2 is a table of energy changes during one cycle. Complete Fig. 3.2. [3]

section of cycle	heat supplied to gas / J	work done on gas / J	increase in internal energy of gas / J
A → B	zero	4.2	
B → C	- 8.5		
C → A			

Fig. 3.2

(c) Heat is a type of energy, but temperature is not a type of energy.

State two other differences between heat and temperature.

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2.
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