

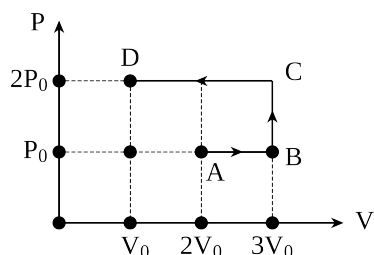
JEE MAIN THERMODYNAMICS (PHYSICS) — HEAT, INTERNAL ENERGY AND WORK — PYQS

Max. Marks: 12

Questions: 3

Section A (MCQ) — 3 questions

Q.1



Using the given $P - V$ diagram, the work done by an ideal gas along the path ABCD is :

[JEE Main 2025 (Online) 23rd January Evening Shift]

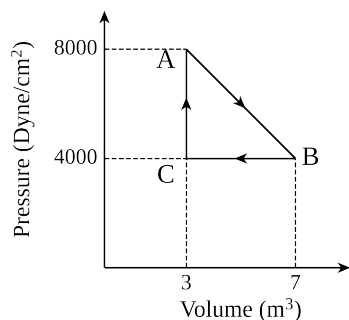
- (1) $3P_0 V_0$ (2) $-3P_0 V_0$
 (3) $-4P_0 V_0$ (4) $4P_0 V_0$

 Scan or tap for the
full solution


Q.2

A thermodynamic system is taken from an original state A to an intermediate state B by a linear process as shown in the figure. Its volume is then reduced to the original value from B to C by an isobaric process. The total work done by the gas from A to B and B to C would be :

[JEE Main 2024 (Online) 29th January Morning Shift]



- (1) 800 J (2) 2200 J
 (3) 33800 J (4) 1200 J

 Scan or tap for the
full solution


Q.3

0.08 kg air is heated at constant volume through 5°C . The specific heat of air at constant volume is $0.17 \text{ kcal/kg}^\circ\text{C}$ and $J = 4.18 \text{ joule/cal}$. The change in its internal energy is approximately.

[JEE Main 2024 (Online) 27th January Morning Shift]

- (1) 318 J (2) 298 J (3) 284 J (4) 142 J

 Scan or tap for the
full solution


ANSWER KEY

Ques.	1	2	3								
Ans.	2	1	3								