

QUES 05:-

An ideal gas is initially at P_1, V_1 is expanded to P_2, V_2 and then compressed adiabatically to the same volume V_1 and pressure P_3 . If W is the net work done by the gas in complete process which of the following is true [2004S]

- (a) $W > 0; P_3 > P_1$ (b) $W < 0; P_3 > P_1$
(c) $W > 0; P_3 < P_1$ (d) $W < 0; P_3 < P_1$

- (b) In the first process W_{AB} is +ve as ΔV is positive, in the second process W_{BC} is -ve as ΔV is -ve and area under the curve of second process is more
 \therefore Net Work < 0 and also $P_3 > P_1$.

