

$$= - (\text{area of } \square BFEC)$$

$$= - (300 \times 3) = -900 \text{ J}$$

$$(iii) \underline{F \rightarrow D}: V = \text{const} \Rightarrow \Delta V = 0$$

$$W_{FD} = p \cdot \Delta V = 0.$$

(iv) Total work done in the cyclic process

$$W = W_{DE} + W_{EF} + W_{FD}$$

$$= 1350 + (-900) + 0 = +450 \text{ J}$$

$\Rightarrow$ work is done by the system.