

Ans (5) Load (L) = 600 N

Resistance due to Movable parts = 400 N

Effort (E) = 200 N

1.  $M.A = \frac{\text{Load (L)}}{E} = \frac{1000 \text{ N}}{200 \text{ N}} = 5$

2. The mechanical advantage of the pulley system = No. of pulley  $\times$  (n) = 5

3. (VR) = No. of pulleys = 5

4. (CMA) = n - (W/E) = 5 - (400/200) = 3

$$\eta = \frac{MA}{VR} \times 100 = \frac{3}{5} \times 100$$
$$= 60\%$$