

18 A loaded aeroplane has a total mass of $1.2 \times 10^5 \text{ kg}$ while climbing after take-off. It climbs at an angle of 23° to the horizontal with a speed of 50 m s^{-1} . What is the rate at which it is gaining potential energy at this time?

A $2.3 \times 10^6 \text{ J s}^{-1}$

B $2.5 \times 10^6 \text{ J s}^{-1}$

C $2.3 \times 10^7 \text{ J s}^{-1}$

D $2.5 \times 10^7 \text{ J s}^{-1}$

19 When a horizontal force F is applied to a frictionless trolley over a distance s , the kinetic energy