PQ 11 Questions and Answers

PQ 1

A 1000 kg car is going at 30 m/s (70 mph). How much energy will be needed to stop it?

PQ 2

A pupil of mass 50 kg climbs stairs of vertical height 7 m in a time of 9 s.

Calculate the power used.

PQ 3

A car of mass 800 kg, travelling at 20 m/s, is brought to rest in 40 s. What is the power of the brakes?

PQ 4

A crane lifts a load of bricks of mass 1200 kg onto a building of height 12 m.
The carrier itself has a mass of 300 kg.
What minimum power must the motor of the lift develop to lift the bricks in 15 s?

PQ 5

An athlete of mass 75 kg is at a height of 2.2 m. Calculate his potential energy.

PQ 6

A lift can carry a load of twelve passengers of average mass 85 kg through a height of 20 m in 15 s. Calculate the minimum power output of the lift's motor.