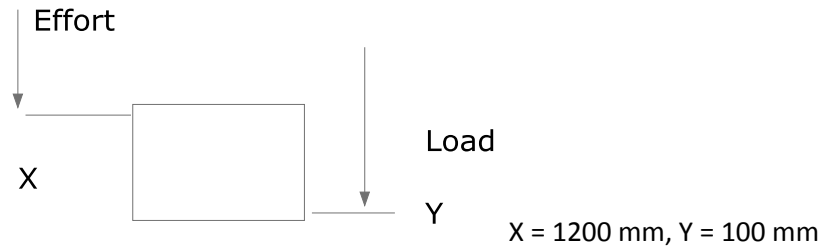


## E029+G012 Online Test

Ref44

A simple machine in figure, the load is 450N, effort is 60N. the load and effort movement is 100mm and 1200 mm respectively. The mechanical advantage and velocity ratio are



A	18,6	B	20,10
C	10,12	D	9,12
Answer			

Ref46

A steel specimen 10 mm diameter rupture under 37KN , the ultimate strength is

A	800N/mm <sup>2</sup>	B	1200N/mm <sup>2</sup>
C	471N/mm <sup>2</sup>	D	1024N/mm <sup>2</sup>
Answer			

Ref49

600 mL sulphuric acid has a mass of 1.11 Kg, The density and relative density are

A	3000 kg/ m <sup>3</sup> , 3	B	4000 kg/ m <sup>3</sup> , 4
C	5000 kg/ m <sup>3</sup> , 1	D	1850 kg/ m <sup>3</sup> , 1.85
Answer			

Ref51

The total stopping distance of a car for total time taken from the point where the driver sights the danger if the driver's reaction time before applying the brake is 0.9 sec with initial velocity 60 km/ hr and retardation due to brake is  $7.5 \text{ m/s}^2$

A	60m	B	33.5m
C	100m	D	150m
Answer			

Ref53

A flywheel makes 200 revolutions. Torque is 35 N-m. The work is

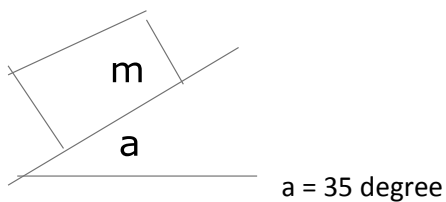
A	44000J	B	22000J
C	11000J	D	66000J
Answer			

Ref55

The acceleration of a body of 25 kg mass due entirely to it's own weight is

A	$9.81 \text{ m/s}^2$	B	$16 \text{ m/s}^2$
C	$29 \text{ m/s}^2$	D	$4 \text{ m/s}^2$
Answer			

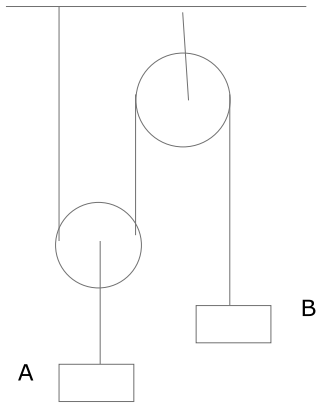
Ref56



The acceleration of a given mass sliding down the plane is

A	$20 \text{ m/s}^2$	B	$2 \text{ m/s}^2$
C	$5.63 \text{ m/s}^2$	D	$3 \text{ m/s}^2$
<b>Answer</b>			

Ref 58



The acceleration of bodies A and B and the force tension in the cord are

A	$1.51 \text{ m/s}^2, 22.6 \text{ N}$	B	$0.75 \text{ m/s}^2, 11.6 \text{ N}$
C	$3 \text{ m/s}^2, 30 \text{ N}$	D	$4 \text{ m/s}^2, 40 \text{ N}$
<b>Answer</b>			

Ref59

Determine the net torque required to give a flywheel with a mass moment of inertia  $0.8 \text{ kg-m}^2$ , angular acceleration is  $18 \text{ rad/s}^2$ .

A	24 N-m	B	12 N-m
C	36 N-m	D	54 N-m
<b>Answer</b>			

Ref61

Determine the centrifugal force acting on a passenger of mass 75 kg in a car travelling at 90 km/hr around a curve of 100 m radius.

A	900 N	B	600 N
C	468.75 N	D	234 N
Answer			

Ref63

Calculate the kinetic energy of mass moment of inertia of  $61 \text{ kg}\cdot\text{m}^2$  rotating at 250 rpm.

A	10452 J	C	20904 J
C	30000 J	D	40000 J
Answer			

Ref65

When a golf ball having a mass 50 g is struck by club. The ball and club are in contact for 0.001 sec immediately after the impact. The ball travels at 45 m/s. Determine the average force of collision.

A	6000 N	C	3000 N
C	1500 N	D	7500 N
Answer			

Ref170

A motor consumes 10 KW power when connected to 259V. Calculate the current

A	46A	B	20A
C	80A	D	10A
Answer			

Ref171

A resistance  $10\Omega$  is connected to 90V DC supply. Find the current and power

A	4.5A, 405W	B	9A, 405W
C	4.5A, 810W	D	9A, 810W
Answer			

Ref172

A power station supplying 100 W at 10 KV . Find (a) current (b) If line impedance is  $0.1\Omega/\text{km}$  , for 200 Km line, find line drop.

A	100A, 2000V	B	10A, 200V
C	100A, 200V	D	10A, 2000V
Answer			