

Power is equal to the dot product of force and:

Select the correct option



Position vector



Displacement



Velocity



Acceleration

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The frequency which is not audible to the human ear is

Select the correct option



50000 Hz



500 Hz



5000 Hz



50 Hz

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Question # 7 of 10 (Start time: 09:37:29 AM, 14 June 2021)

A wheel of radius 50 cm having the angular speed of 5 rad/s will have linear speed in m/s?

Select the correct option

☐	1.5
☒	2.5
☐	3.5
☐	0.5

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When breaks are applied to a fast moving car, the passenger will be throws:

Select the correct option



Backward



Forward



Upward



Downward

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Stress can be measured in:

Select the correct option

☐	N·m
☒	N/m ²
☐	N·m ²
☐	N/m

A heavy particle moving with 5 m/s suffers an elastic collision with a light particle at rest. After collision, the velocity of light particle will be:

Select the correct option

☐	10 m/s
☐	2.5 m/s
☐	20 m/s
☒	5 m/s

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Acceleration in a body is always produced in the direction of:

Select the correct option

☒	Velocity
☐	Weight
☐	Acceleration
☐	Force

Question # 2 of 10 (Start time: 09:33:11 AM, 14 June 2021)

Total Marks: 1

The fundamental dimensions of angular momentum are

Select the correct option

☐	ML-2T-2	
☒	ML ² T-1	
☐	ML ² T-2	
☐	MLT-1	

Question # 1 of 10 (Start time: 09:32:49 AM, 14 June 2021)

Total Marks: 1

Ali wants to lift a mass of 7.5 kg with constant velocity by a rope that passes through a frictionless pulley which is attached to the ceiling of room. Calculate the tension in the rope by neglecting the mass of the rope.

Select the correct option

☐	75 N
☐	7.5 Kg
☐	75 Kg
☒	0.75 N

The first condition of equilibrium implies that:

Select the correct option

☐	$\Sigma F_y = 0$
☐	$\Sigma F_x = \Sigma F_y$
☒	$\Sigma F = 0$
☐	$\Sigma F_x = 0$

Final take off velocity of an airplane is 67 m/s. The length of runway is 2 km, the constant acceleration is:

Select the correct option

☐	3.24 ms^{-1}
☒	3.24 ms^{-2}
☐	2.24 ms^{-2}
☐	2.24 ms^{-1}

The ultimate strength of a sample is the stress at which the sample:

Select the correct option

☐	remains underwater
☒	breaks
☐	bends 180°
☐	returns to its original shape when the stress is removed

Question # 6 of 10 (Start time: 09:26:17 AM, 14 June 2021)

Tot

The area under the velocity time graph is:

Select the correct option

☐	Acceleration
☐	Torque
☒	Distance
☐	Force

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Question # 5 of 10 (Start time: 09:25:04 AM, 14 June 2021)

Total

if you travelled for 2.5 hours with an average speed 48 miles/hours, the distance travelled is:

Select the correct option

☒	19.2 miles
☐	120 miles
☐	300 miles
☐	48 miles

A fire whistle emits a tone of 170 Hz. Take the speed of sound in air to be 340m/s. The wavelength of this sound is about:

Select the correct option



1.0m



2.0m



0.5m



3.0m

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Question # 4 of 10 (Start time: 09:23:49 AM, 14 June 2021)

Total Marks:

motion defines by the pair of variables:



Select the correct option

☐	Speed and passage of time
☐	Speed and distance
☒	Change of position and passage of time

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The law of inertia was firstly formulated by:

Select the correct option

☐	Newton
☐	Einstein
☒	Galileo
☐	Aristotle

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Question # 3 of 10 (Start time: 09:22:09 AM, 14 June 2021)

Total Mark

When the velocity of an aeroplane is doubled, the momentum _____

Select the correct option

☐	Is conserved
☐	Becomes zero
☒	Increases uniformly
☐	Remains unchanged

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As we move above, the body above the surface of the earth, the change in potential energy will be:

Select the correct option

☐	Infinity
☒	Positive
☐	Zero
☐	Negative

The slope of a velocity - time the graph at any point may be identified with:

Select the correct option

☐	instantaneous acceleration
☐	average acceleration
☒	instantaneous velocity
☐	instantaneous acceleration

A body of mass 2 kg moving with velocity 4 m/s has K.E equals to:

Select the correct option

☐	16 J
☒	8 J
☐	32 J
☐	2 J

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A body will be in translational equilibrium if:

Select the correct option

☐	$\Sigma T = 0$
☒	$\Sigma F = 0$
☐	$\Sigma W = 0$
☐	$\Sigma P = 0$

A _____ vector is obtained by dividing the vector by its magnitude:

Select the correct option

☐	negative
☒	unit
☐	position
☐	normal