Of the following situations, which one is impossible?

Answer (Please select your correct option)

○ A body having velocity east and acceleration east

○ A body having velocity east and acceleration west

○ A body having constant velocity and variable acceleration

○ A body having constant acceleration and variable velocity

A plane traveling north at 200m/s turns and then travels south at 200m/s. The change in its velocity is:

Answer (Please select your correct option)

○ 400m/s north

○ 400m/s south

○ zero

○ 200m/s south

The inertia of a body tends to cause the body to:

Answer (Please select your correct option)

○ speed up

○ slow down

○ resist any change in its motion

○ fall toward Earth

A car travels east at constant velocity. The net force on the car is:

Answer (Please select your correct option)

○ east

○ west

○ down

○ zero
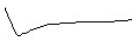
A ball is thrown upward into the air with a speed that is greater than terminal speed. It lands at the place where it was thrown. During its flight the force of air resistance is the greatest:

Answer (Please select your correct option)

○ just after it is thrown

○ halfway up

○ at the top of its trajectory

○ halfway down

An object moves in a circle at constant speed. The work done by the centripetal force is zero because:

Answer (Please select your correct option)

○ the displacement for each revolution is zero

○ the average force for each revolution is zero

○ there is no friction

○ the centripetal force is perpendicular to the velocity

A 6.0-kg block is released from rest 80m above the ground. When it has fallen 60m its kinetic energy is approximately:

Answer (Please select your correct option)

○ 4800 J

○ 3500 J

Correct answer solved by hadi
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○ 1200 J

○ 120 J

Made By: Waqar Siddhu

The momentum of an object at a given instant is independent of its:

Answer (Please select your correct option)

○ acceleration

○ mass

○ speed

○ inertia

The center of mass of the system consisting of Earth, the Sun, and the planet Mars is:

Answer (Please select your correct option)

○   closer to Earth than to either of the other bodies

○   closer to the Sun than to either of the other bodies

○   closer to Mars than to either of the other bodies

○   at the geometric center of the triangle formed by the three bodies

A net torque applied to a rigid object always tends to produce:

Answer (Please select your correct option)

○ linear acceleration

○ rotational equilibrium

○ angular acceleration

○ rotational inertia

In simple harmonic motion, the restoring force must be proportional to the:

Answer (Please select your correct option)

○ amplitude

○ frequency

○ velocity

○ displacement

A particle oscillating in simple harmonic motion is:

Answer (Please select your correct option)

○　in equilibrium at the ends of its path because its velocity is zero there

○　in equilibrium at the center of its path because the acceleration is zero there

Correct answer solved by hadi
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○　never in equilibrium because it is in motion

○　never in equilibrium because there is always a force

A 160-N child sits on a light swing and is pulled back and held with a horizontal force of 100 N. The magnitude of the tension force of each of the two supporting ropes is:

Answer (Please select your correct option)

○ 60N

○ 94N

○ 120N

○ 190N

Young's modulus is a proportionality constant that relates the force per unit area applied perpendicularly at the surface of an object to:

Answer (Please select your correct option)

○ the shear

○ the fractional change in volume

○ the fractional change in length

○ the pressure

Which of the following five statements, concerning the upper surface pressure of a liquid, is FALSE?

Answer (Please select your correct option)

○ It is independent of the surface area

○ It is the same for all points on that surface

○ It would not increase if the liquid depth were increased

○ It would increase if the liquid density were increased

Whenever an object strikes a stationary object of equal mass:

Answer (Please select your correct option)

○ the two objects cannot stick together

○ the collision must be elastic

○ momentum is not necessarily conserved

○ none of these

Which of the following properties of a sound wave determine its "pitch"?

Answer (Please select your correct option)

○ Amplitude

○ Distance from source to detector

○ Frequency

○ Phase

In the MKS system, charge is measured in

Answer (Please select your correct option)

○ Farad

○ Coulomb

○ Henry

○ Tesla

Like charges repel, unlike charges attract. This depends upon the

Answer (Please select your correct option)

○ strength of the two charges and the distance between them.

○ strength of the two charges

○ distance between the two charges

○ none of these, given statement is irrelevant

What does it mean to say that angular momentum is conserved?

Answer (Please click here to Add Answer)

Does Archimedes' principle tell us that, if an immersed object displaces liquid weighing 10 N, the buoyant force on the object is 10 N?

Answer (Please click here to Add Answer)

(a)   What angle in radians is subtended by an arc 1.50 m in length on the circumference of a circle 2.50 m? What is this angle in degrees?

(b)   An arc 14.0 cm in length on the circumference of a circle subtends an angle of 128^0. What is the radius of the circle?

(c)   The angle between two radii of a circle with radius 1.50 m is 0.700 **rad**. What   length of arc is intercepted on the circumference of the circle by the two radii?

Answer (Please click here to Add Answer)

Match the situation in column-A with the categories of stress in column-B.

COLUMN-A	COLUMN-B
(a) A cable being stretched by forces acting at its end.	(a) Bulk stress

Answer (Please click here to Add Answer)

| Normal | Arial | 12 | B I U |

Rank an automobile dashboard, seatbelt, and airbag in terms of (a) the impulse and (b) the average force they deliver to a front-seat passenger during a collision, from greatest to least.

Answer (Please click here to Add Answer)

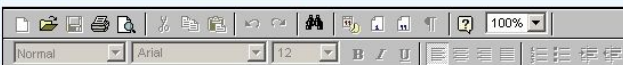(a) A 20 dB sound is twice as intense as a 10 dB sound, explain it.
(b) The degree of Doppler shift experienced by a listener is independent of how far the listener is from a moving sound source. Is it true or wrong explain it?

Answer (Please click here to Add Answer)