Question # 1 of 10 (Start time: 04:34:03 PM, 23 June 2020)

Take the speed of sound to be 340m/s. A thunder clap is heard about 3 s after the lightning is seen. The source of both light and sound is:

Select the correct option

○	moving overhead faster than the speed of sound
●	emitting a much higher frequency than is heard
○	emitting a much lower frequency than is heard
○	about 1000m away

Question # 3 of 10 (Start time: 04:36:28 PM, 23 June 2020)

If force is applied at center of mass then torque is

Select the correct option

○	infinity
○	1
■	zero
○	maximum

Question # 4 of 10 (Start time: 04:36:59 PM, 23 June 2020)

For an object in equilibrium the net torque acting on it vanishes only if each torque is calculated about:

Select the correct option

◉	the center of mass
○	the center of gravity
○	the geometrical center
○	the same point

Question # 5 of 10 (Start time: 04:37:44 PM, 23 June 2020)

As the wavelength of a wave in a uniform medium increases, its speed will _____.

Select the correct option

○	Decrease
◉	Increase
○	Remain the same
○	None of these

Question # 6 of 10 (Start time: 04:38:46 PM, 23 June 2020)

In the formula F= Gm1m2/r2, the quantity G:

Select the correct option

○	depends on the local value of g
■	is used only when Earth is one of the two masses
○	is greatest at the surface of Earth
○	is a universal constant of nature

Question # 8 of 10 (Start time: 04:40:21 PM, 23 June 2020)

A force of 5000N is applied outwardly to each end of a 5.0-m long rod with a radius of 34.0 cm and a Young's modulus of 125 × 108 N/m2. The elongation of the rod is:

Select the correct option

○	0.0040mm
○	0.14mm
■	0.55mm
○	1.42mm

uestion # 9 of 10 (Start time: 04:42:20 PM, 23 June 2020)

water bed that is 1.5 m wide and 2.5 m long weighs 1055 N. Assuming the entire lower surface of the bed is in contact with the floor, what is the pressure the bed exerts on the floor?

lect the correct option

○	250 Pa
○	260 Pa
○	270 Pa
●	280 Pa

In ..... object moves farther away from its original position if displaced slightly

Select the correct option

○	dynamic equilibrium
○	stable equilibrium
●	unstable equilibrium
○	rotational equilibrium

In ..... object moves farther away from its original position if displaced slightly

Select the correct option

○	dynamic equilibrium
○	stable equilibrium
●	unstable equilibrium
○	rotational equilibrium