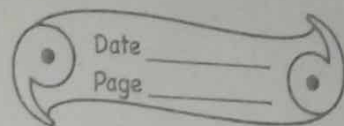


HW
7/12/2021

GRAVITATION



1) Which force is responsible for stability of our universe?

Ans- ~~The~~ The gravitational force is responsible for stability of our universe.

2) Which force is required to maintain a body in uniform circular motion?

Ans- Centripetal force is required to maintain a body in uniform circular motion.

3) What is gravity?

Ans- Force of attraction exerted by earth on nearby objects is called force of gravity.

ex- Moon revolves around earth because of force of gravity of earth on moon.

4) How is the weight of an object related to its mass?

Ans- The weight of an object is a measure of the force exerted on the object by gravity, or the force.

$$W = mg$$

5) Mass of boy on earth is 40kg, what is the mass on the moon?

Mass of Earth = 40kg

It will have same mass on the Moon.

So, the mass on the moon is 40kg

6) What is the effect of shape of earth on value of 'g'?

Ans - $g = \frac{GM}{R^2}$

hence $g \propto \frac{1}{R^2}$

Thus, acceleration due to gravity at a place is inversely proportional to the square of the distance of the point from the center of earth