

Gravitation

1. What is centripetal force? explain with example.
2. What is universal law of gravitation. Drive its formula.
3. List main importance of universal law of gravitation.
4. What do you understand by 'free fall'? why is it always accelerated ?
5. Is g is always equal on everywhere on the surface of the earth?
6. A car fall off a ledge and drops to the ground in 5 sec. $g=10\text{m/s}^2$
7. ¹what is the speed on striking the ground .2..what is the average speed during the 0.5s....3.how high is the ledge from ground?
8. 7.An object is thrown vertically upward and rises to a height of 10m
 - 1.the velocity with which object was throw upwards .2..the time taken by the object to reach the height point. $G=9.8\text{m/s}$
9. Differentiate between weight and mass?
- 10.Mass of an object is 10kg .what is its weight on the earth?
11. How does the force of gravitation between two objects change when the distance between them is reduced to half? Show it.
12. What is the magnitude of the gravitation force between the earth and 1kg object on its surface.mass of earth $6*10^{24}$,radius of earth is $6.4*10^6$.
- 13...A stone is allowed to fall from a top of the tower 100m high and at the same time another stone is projected vertically upwards from the ground with velocity of 25m/s.calculate when and where the two stones will meet.