Numericals

Practice. Learn. Succeed

Sub : Science **Grade: IX** **Date: .....**

Name: ..... **ID No.....**

1. As a body moves to a place 1,600 km above the surface of a planet then the value of acceleration due to gravity of that planet reduces to 9/16 of its value on the surface of that planet. Calculate the radius of planet.

$$\left[\text{Hint : Use formula } g = \frac{GM}{R^2} \text{ and } g' = \frac{GM}{(R+h)^2}\right]$$

2. A man in a coal mine experienced that the weight of his body reduced from 800 N to 777 N. Calculate the depth at which he was at that time. Radius of the earth = 6,400 km.

3. A body of mass 4 kg is placed between two bodies of masses 12 kg and 48 kg separated by a distance of 4 metre, so that it experiences null force. Find the distance of this body from the 48 kg body.

4. A ball is dropped from the top of a tower 40 m high. What is its velocity when it has covered 20 m? What would be its velocity when it hits the ground? [Take g = 10 m/s^2]