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SUBJECT:- PHYSICS

CLASS:- IXTH

DATE:23/06/XX

SUBJECT TEACHER:- MR. NEEL NIRANJAN

CHAPTER 3. (GRAVITATION)

Question 27:

Explain what is meant by the equation :

$$g = G \times \frac{M}{R^2}$$

where the symbols have their usual meanings.

Solution :

This is the acceleration produced by the earth. It is also called acceleration due to gravity.

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$$g = G \times \frac{M}{R^2}$$

where, G= gravitational constant

M= mass of the earth.

R=radius of the earth

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Question 28:

(a) What do you mean by the term 'free fall' ?

(b) During a free fall, will heavier objects accelerate more than lighter ones ?

Solution :

(a) The falling of a body from a height towards the earth under the gravitational force of the earth (with no other forces acting on it) is called free fall.

(b) No, acceleration is independent of the mass of the body during free fall.