

VIDYA BHAVAN, BALIKA VIDYAPEETH
SHAKTI UTTHAN ASHRAM, LAKHISARAI, PIN:-811311

SUBJECT:- PHYSICS

CLASS:- IXTH

DATE:04/07/XX

SUBJECT TEACHER:- MR. NEEL NIRANJAN

CHAPTER 3. (GRAVITATION)

Question 48:

Which is more fundamental, the mass of a body or its weight ? Why ?

Solution :

The mass of a body is more fundamental because mass of a body is constant and does not change from place to place.

Question 49:

How much is the weight of an object on the moon as compared to its weight on the earth ? Give reason for your answer

Solution :

The weight of an object on the moon is about one-sixth of its weight on the earth. This is because the value of acceleration due to gravity on the moon is about one-sixth of that on the earth.

Question 50:

- (a) Define mass of a body. What is the SI unit of mass ?
- (b) Define weight of a body. What is the SI unit of weight ?
- (c) What is the relation between mass and weight of a body ?

Solution :

- (a) The mass of a body is the quantity of matter contained in it. The SI unit of mass is kilogram (kg).
- (b) The weight of a body is the force with which it is attracted towards the centre of the earth. The SI unit of weight is newton (N).
- (c) Weight, $W = m \times g$, i.e. the weight of a body is directly proportional to its mass.