

CCT TEST ITEM

CLASS : PLUS ONE

SUBJECT: PHYSICS

Name of the Teacher : Anjali v

Name of the chapter : Laws of motion

The person of 60 kg is standing on a platform scale balance kept on the floor of an elevator cab is capable of motion in up or down direction with either a uniform velocity or a constant acceleration. The value of velocity as well as acceleration may be adjusted at any suitable value. Newtons second law of motion can be applied for the motion of elevator cab. Take $g = 10\text{m/s}^2$

Q.1. Observed weight of the person ,when elevator is at rest is

- a) 600 N**
- b) 300 N**
- c) 900 N**
- d) 120 N**

Ans. 600 N

Q.2. Observed weight of the person when elevator cab is moving upward with a constant velocity of 2m/s will be

- a) 600 N**
- b) 450 N**
- c) 800 N**
- d) 500 N**

Ans. 600 N

Q.3. Observed weight of the person when elevator cab is going upward with a constant acceleration of $g/4$ will be

- a) 600 N**
- b) 750 N**
- c) 800 N**

d) 500 N

Ans. 750 N

Q.4. If the elevator cab suddenly goes out of order and starts falling freely under gravity then observed weight of the person will be .

a) 60 kg

b) 120 kg

c) 30 kg

d) zero

Ans. 30 Kg