2018-Ph-H1-Q4

Section: Our Dynamic Universe
Topic: Forces

Summary:
A person (weight 700 N) stands in a lift. The lift descends and speeds up at a constant rate. What happens to the reading on the weighing machine?

Solution:

- As the lift accelerates downwards, the normal force (reading on the machine) is **less** than the person's weight.
- Since the acceleration is constant, the reading stays **constant but lower than 700 N**.

Answer: B. A constant value lower than 700 N

Guidance for Students:

- The reading on a scale measures the normal force, not the actual weight.
- Downward acceleration reduces the normal reaction force.

Revision Tips:

- **If lift accelerates upward:** reading > weight.
- **If lift accelerates downward:** reading < weight.
- **Constant speed or rest:** reading = weight.