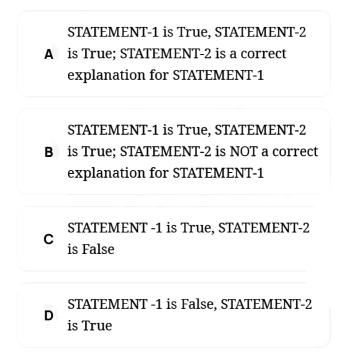
Question

STATEMENT-1 An astronaut in an orbiting space station above the Earth experiences weightlessness.

and

STATEMENT-2

An object moving around the Earth under the influence of Earths gravitational force is in a state of free-fall.



Solution

Correct option is A)

For the body to follow circular path, there must be a centripetal force. Here the astronaut is inside a satellite which is revolving around the earth under the influence of earth's gravitation. Thus, the earth's gravitation acts as centripetal force and the net force on astronaut is zero. Statement 2 is right explanation of 1.