



Chapter wise Test papers - 05

LAWS OF MOTION

General Instructions:

Answer all the questions. If you are unable to answer any question, go through the page number that is given against that particular question in the text book. You can find the answer.

MAX MARKS: 20**TIME: 30 min**

1. All questions are compulsory.

2. Please give the explanation for the answer where applicable.

Q. 1. - When a ball falls on the earth, the earth also moves up to meet it. But the motion of the earth is not noticeable. Explain why? (2 Marks)

Q. 2. - Can a single isolated force exist in nature? Give reason. (2 Marks)

Q. 3. - When a man jumps out of a boat, the boat is pushed away. Why? (2 Marks)

Q. 4. - A body of mass m moves along x -axis such that its position co-ordinate at any instant t is $x = at^4 - bt^3 + ct$. Where a, b, c are constant. What is the force acting on the particle at any instant. (3 Marks)

Q. 5. - Express newton's second law of motion in component form. Give its significance. (3 Marks)

Q. 6. - An electric bulb suspended from the roof of a railway train by a flexible wire shifts through an angle of 19.48° when the train goes horizontally round a curved path of 200m radius. Find speed of train. (5 Marks)

Q. 7. - Is an external force required to keep a body in uniform motion? (1 Mark)

Q. 8. - Suppose you are sitting inside a van at rest. You push the van from within. will it move? (1 Mark)

Q. 9. - Is force of friction independent of path? (1 Mark)