



**Octahedral classes, kharadi**  
**2nd floor, yashwant plaza, near bank of India,**

**Class 09 - Science**

**Nlm**

**Maximum Marks: 31**

**Time Allowed: 1 hour and 30 minutes**

**Section A**

1. Why do bicycles begin to slow down when we stop pedalling? **1**
2. When a force acting on a body has equal and opposite reaction, then why should the body move at all? **1**
3. What did Galileo conclude on the basis of his experiments on the motion of objects? **1**
4. What do balanced forces usually do to a body? **1**
5. Define 1 newton force. **1**
6. What do you mean by a resultant force? **1**
7. Does Newton's third law apply to a system where bodies do not actually touch each other? **1**
8. State Newton's first law of motion. **1**
9. Suppose a ball of mass 'm' is thrown vertically upwards with an initial speed 'v', its speed decreases continuously till it becomes zero. Therefore, the ball begins to fall downward and attains the speed 'v' again before striking the ground. It implies that the magnitude of initial and final momenta of the ball are same. Yet, it is not an example of conservation of momentum. Explain why. **1**
10. What is the total momentum of a bullet and a gun before firing? **1**
11. If the body is found to be accelerated, is the force acting on it balanced or unbalanced? **1**
12. Name the scientist who proved for the first time that objects move with constant speed when no force acts on them. **1**
13. Why mass is sometimes called coefficient of linear inertia? **1**
14. A body is moving with uniform acceleration. Is its momentum constant? **1**
15. Do action and reaction act on the same body? **1**
16. Which principle is involved in the working of a jet plane? **1**
17. Which law of motion gives the measure of force? **1**

18. State Newton's second law of motion? **1**
19. Body A is heavier than body Q. Which has more inertia? **1**
20. When a body moves on a flat surface, will its speed change? **1**
21. Does every force produce motion in every object? **1**
22. Name the principle on which a rocket works. **1**
23. Why does a mug full of water feel lighter inside water? **1**
24. Define force of friction. **1**
25. Name the physical quantity that corresponds to the rate of change of momentum. **1**
26. Using a horizontal force of 200 N, we intend to move a wooden cabinet across a floor at a constant velocity. What is the friction force that will be exerted on the cabinet? **1**
27. Write the C.G.S unit of force. **1**
28. Plot a graph between force applied on a body and the acceleration produced in the given mass, assuming that the magnitude of force is constantly changing. **1**
29. Define electrostatic force. **1**
30. Write the SI unit of impulse. **1**
31. What do you mean by an impact force? **1**