Scope Tuition centre

Class Test: Physics (Laws of Motion & Work Energy Power)

Total marks: 50

One-mark questions:

1. State first Law of Motion (Law of Inertia)
2. Define Force
3. Define concept of momentum.
4. State Impulse and write the Equation for the same.
5. SI Unit of linear momentum is_____
6. What is the nature of work done by force of gravity?

Two- mark questions:

7. Derive the equation F=ma
8. Explain any one application of conservation of momentum
9. Explain static and Kinetic friction
10. Mention any to method of reducing friction
11. Explain how friction helps in walking.

Three Mark Questions

12. Explain Work and mention the condition when work is Zero, Negative and positive.
13. State and Explain work energy theorem
14. Define collision and list the type of collisions.

Five-mark questions

15. State and prove the principle of conservation of linear momentum.
16. A constant force on a body of mass 3 kg changes its speed from 2 m/s to 3.5 m/s in 25 sec. The direction of the motion of the body remains unchanged. What is the magnitude and direction of the force?
17. A rocket with lift of mass 20,000 kg is blasted upwards with an initial acceleration of 5 m/s^2. Calculate the initial Thrust (Force) of the blast.
18. Derive the equation of final velocity after elastic collision.
19. Prove that total energy of an isolated system is always conserved.