**Aarambh Classes**

**Class iX**

**PHYSICS TEST**

**FORCES AND LAWS OF MOTION**

**TIME : 1HOUR M.Marks : 20**

1. **Explain why ,it is easier to stop atennis ball than acricket ball moving with the same speed .**
2. **Explain how ,a karate player can break a pile of tiles with a single blow of his hand .**
3. **Why do the passengers in a bus tend to fall backward when it starts suddenly ?**
4. **Calculate the change in momentum of abody weighing 5 kg when its velocity decreases from 20 m/s to 0.20 m/s .**
5. **Why is it difficult to walk on a slippery road ?**
6. **If action is always equal to reaction,explain why a cart pulled by a horse can be moved .**
7. **A 10 g bullet travelling at 200m/s strikes and remains embedded in a 2 kg target which is originally at rest but free to move .At what speed does the target move off ?**
8. **Explain why a cricket player moves his hands backwards while catching a fast cricket ball .**
9. **A 150 g ball ,travelling at 30m/s ,strikes the palm of a player’s hand and is stopped in 0.05 s .Find the force exerted by the ball on the hand .**
10. **A truck of mass 500 kg moving at 4 m/s collides with another truck of mass 1500 kg moving in the same direction at 2 m/s .What is their common velocity just after the collision if they move off together ?**