

## 1 Question set

- 3 ) The initial velocity of a ball of mass 1 kg is 9 metre/s, and after 12 secs the final velocity is 10 metre/sec. What is the rate of change in momentum?
- 4 ) A 12 kg rifle fires a 10 g bullet at a velocity of 9 m/s find the recoil velocity of the rifle?
- 5 ) An airplane accelerates down a runway at 5 m/s<sup>2</sup> for 7 s until is finally lifts off the ground. Determine the distance traveled before takeoff
- 6 ) In order to gain a velocity of 10 m/s how long should a force of 4 N be exerted on a body of mass 5 kg that is initially at rest?

## 2 Question set

- 10 ) The initial velocity of a ball of mass 13 kg is 3 metre/s, and after 1 secs the final velocity is 9 metre/sec. What is the rate of change in momentum?
- 11 ) A 10 kg rifle fires a 4 g bullet at a velocity of 7 m/s find the recoil velocity of the rifle?
- 12 ) An airplane accelerates down a runway at 3 m/s<sup>2</sup> for 14 s until is finally lifts off the ground. Determine the distance traveled before takeoff
- 13 ) In order to gain a velocity of 12 m/s how long should a force of 13 N be exerted on a body of mass 4 kg that is initially at rest?

## 3 Question set

- 17 ) The initial velocity of a ball of mass 5 kg is 13 metre/s, and after 14 secs the final velocity is 15 metre/sec. What is the rate of change in momentum?
- 18 ) A 1 kg rifle fires a 7 g bullet at a velocity of 6 m/s find the recoil velocity of the rifle?
- 19 ) An airplane accelerates down a runway at 7 m/s<sup>2</sup> for 9 s until is finally lifts off the ground. Determine the distance traveled before takeoff
- 20 ) In order to gain a velocity of 9 m/s how long should a force of 5 N be exerted on a body of mass 12 kg that is initially at rest?

