1. June/2022/Paper_21/No.9
   Three situations are listed.

   1   An object has a resultant force acting on it.

   2   A moving object experiences an impulse.

   3   An object is decelerating.

   In which situations is the momentum of the object changing?

   A   1 and 2 only   **B**   1 and 3 only   **C**   2 and 3 only   **D**   1, 2 and 3

2. June/2022/Paper_21/No.10
   A ball of mass 0.16 kg is moving forwards at a speed of 0.50 m/s. A second ball of mass 0.10 kg is stationary. The first ball strikes the second ball. The second ball moves forwards at a speed of 0.50 m/s.

   What is the speed of the first ball after the collision?

   A   0.0 m/s   **B**   0.19 m/s   **C**   0.31 m/s   **D**   0.50 m/s

3. June/2022/Paper_22/No.9
   Which statement describes the impulse acting on an object?

   A   Impulse is the change in kinetic energy of the object.

   B   Impulse is the change in momentum of the object.

   C   Impulse is the rate of change of force acting on the object.

   D   Impulse is the rate of change of momentum of the object.

4. June/2022/Paper_22/No.10

A ball of mass 0.16 kg is moving forwards at a speed of 0.50 m/s. A second ball of mass 0.10 kg is stationary. The first ball strikes the second ball. The second ball moves forwards at a speed of 0.50 m/s.

What is the speed of the first ball after the collision?

A 0.0 m/s   **B** 0.19 m/s   **C** 0.31 m/s   **D** 0.50 m/s

5. June/2022/Paper_23/No.9

Which equation for impulse is correct?

A   impulse = Ft

B   impulse = $\dfrac{F}{t}$

C   impulse = $(mv - mu)t$

D   impulse = $\dfrac{(mv - mu)}{t}$

6. June/2022/Paper_23/No.10

A ball of mass 0.16 kg is moving forwards at a speed of 0.50 m/s. A second ball of mass 0.10 kg is stationary. The first ball strikes the second ball. The second ball moves forwards at a speed of 0.50 m/s.

What is the speed of the first ball after the collision?

A 0.0 m/s   **B** 0.19 m/s   **C** 0.31 m/s   **D** 0.50 m/s