Q. Conservation of momentum in a collision between particles can be understood from

(a) conservation of energy
(b) Newton's first law only
(c) Newton's second law only
(d) both Newton's second and third law

Ans. ***(d)*** We know that for a system $F_{ext} = \frac{dp}{dt}$ (from Newton's second law)

If $F_{ext} = 0, dp = 0 \Rightarrow p =$ constant

Hence, momentum of a system will remain conserve if external force on the system is zero.

In case of collision' between particles equal and opposite forces will act on individuel particles by Newtons third law,

Hence total force on the system will be zero.