Unit 3 Dynamics

Sr. No.	Questions	A	B	C	D
1	When we kick a stone, we get hurt. This is due to:	inertia	velocity	momentum	reaction✓
2	An object will continue its motion with constant acceleration until:	the resultant force on it begins to decrease.	the resultant force on it is zero. ✓	the resultant force on it begins to increase.	the resultant force is at right angle to its tangential velocity.
3	Which of the following is a non-contact force?	Friction	Air resistance	Electrostatic force✓	Tension in the string
4	A ball with initial momentum p hits a solid wall and bounces back with the same velocity. Its momentum p' after collision will be:	$p' = p$	$p' = -p$✓	$p' = 2p$	$p' = -2p$
5	A particle of mass m moving with velocity v collides with another particle of the same mass at rest. The velocity of the first particle after collision is:	v	$-v$	0 ✓	$-\frac{1}{2}$
6	Conservation of linear momentum is equivalent to:	Newton's first law of motion	Newton's second law of motion	Newton's third law of motion✓	None of these
7	An object with mass $5\,kg$ moves at constant velocity of $10\,ms^{-1}$. A constant force acts for $5\,s$ and gives it a velocity of $2\,ms^{-1}$ in opposite direction. Force acting is:	$5\,N$	$-10\,N$	$-12\,N$ ✓	$-15\,N$
8	A large force acts on an object for a short time. In this case, It is easy to determine:	magnitude of force	time interval	product of force and time ✓	none of these
9	A lubricant is usually introduced between two surfaces to decrease friction. The lubricant:	decreases temperature	acts as ball bearings	prevents direct contact of the surfaces ✓	provides rolling friction