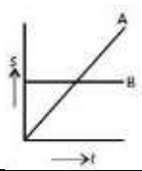
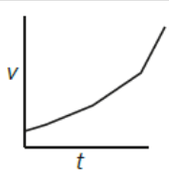
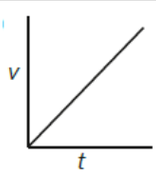
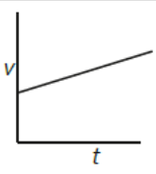
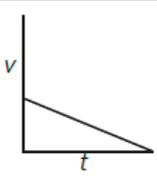
Unit 2 Kinematics

Sr. No.	Questions	A	B	C	D
1	The numerical ratio of displacement to distance is:	always less than one	always equal to one	always greater than one	equal to or less than one✓
2	If a body does not change its position with respect to some fixed point, then it will be in a state of:	rest✓	motion	uniform motion	variable motion
3	A ball is dropped from the top of a tower, the distance covered by it in the first second is:	$5\ m$ ✓	$10\ m$	$50\ m$	$100\ m$
4	A body accelerates from rest to a velocity of 144 kmh^{-1} in $20\ seconds$. The distance covered by it is:	$100\ m$	$400\ m$ ✓	$1400\ m$	$1440\ m$
5	A body is moving with constant acceleration starting from rest. It covers a distance S in $4\ seconds$. How much time does it take to cover one-fourth of this distance?	$1\ s$	$2\ s$ ✓	$4\ s$	$16\ s$
6	The displacement time graphs of two objects A and B are shown in the figure. Point out the true statement from the following: 	The velocity of A is greater than B✓	The velocity of A is less than B	The velocity of A is equal to that of B	The graph gives no information in this regard
7	The area under the speed–time graph is numerically equal to:	velocity	uniform velocity	acceleration	distance covered✓
8	Gradient of the speed–time graph is equal to:	speed	velocity	acceleration✓	distance covered
9	Gradient of the distance–time graph is equal to the:	speed✓	velocity	distance covered	acceleration
10	A car accelerates uniformly from $80.5\ kmh^{-1}$ at $t = 0$ to $113\ kmh^{-1}$ at $t = 9\ s$. Which graph best describes the motion of the car?			 ✓	
11					