INDIAN SCHOOL DARSAIT
Class IX –Physics
Topic: Motion

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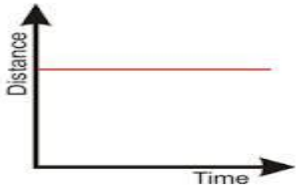
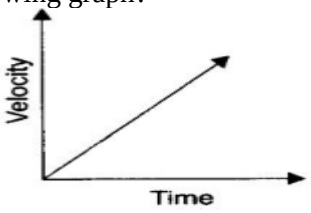
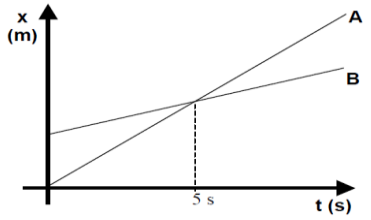
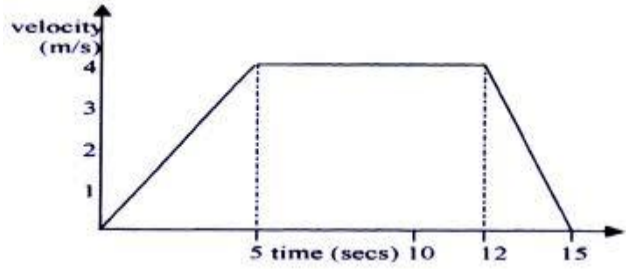
Date : **Class : IX**

	VERY SHORT ANSWER TYPE QUESTIONS
1.	What kind of motion is represented by the following graph?  (a)  (b)
2.	Which of the following is moving faster? (i) A scooter moving with a speed of 300m per minute. (ii) A car moving with a speed of 36 km per hour.
3.	(a) What remains constant in uniform circular motion? (b) What changes continuously in a uniform circular motion?
4.	What can you say about the motion of a body if its speed – time graph is straight line parallel to the time axis?
5.	A boy is moving along a circular path of radius R. What is the distance and displacement of the boy when he completes half a revolution .
	SHORT ANSWER TYPE QUESTIONS
6.	A bus running at a speed of 18 km/h is stopped in 2.5 seconds by applying brakes. Calculate the retardation produced.
7.	Differentiate between speed and velocity.
8.	Is uniform circular motion acceleration accelerated? Give reasons for your answer.
9.	Brakes applied to a car produce a uniform retardation of $0.9 m/s^2$. If the car was travelling with the velocity 27m/s, what distance will it cover before coming to rest.
	LONG ANSWER TYPE QUESTIONS
10.	Draw velocity - time graphs of the following real life examples. a) A train moving on a straight path along a particular direction with a constant velocity b) a train from the station, picking up velocity then moving with a uniform velocity and finally comes to rest at the next station.

	c) a motor bike running at a uniform velocity is brought to rest by uniform retarding force of brakes
11.	Consider the position vs. time graph below for cyclists A and B.  i) Do the cyclists starts at the same point? ii) At t=7S which cyclist is ahead? iii) Which cyclist is travelling faster at time t= 3s iv) Are their velocities equal at any time? If so, when? v) What is happening at the intersection of the two lines A and B?
12.	Study the velocity time graph of a passenger lift in the figure shown below.  i) What is the acceleration of the lift during the first 5 seconds? ii) Between fifth and twelfth second? iii) During the last three seconds?
13.	Draw the velocity –time graph from the data given below. <table><tr><td>Time (in sec)</td><td>2</td><td>4</td><td>6</td><td>8</td><td>10</td><td>12</td><td>14</td></tr><tr><td>Velocity (in m/s)</td><td>5</td><td>10</td><td>15</td><td>20</td><td>20</td><td>10</td><td></td></tr></table> a) What type of motion is represented during 0-6 seconds? b) What is the acceleration in the first 6 seconds? c) Using graph, calculate the distance travelled between 6 to 8 seconds.