

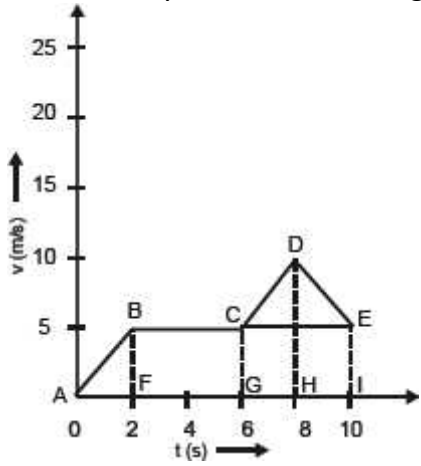



INDIAN SCHOOL DARSAIT
DEPARTMENT OF SCIENCE



Subject : PHYSICS	Topic: Motion	Worksheet no#01
Resource Person: Mrs Sonia Antony		Date : 01/05/17
Name of the Student :	Class & Division :	Roll Number:

Q.NO	QUESTIONS	marks
1	Can a body have constant speed but variable velocity?	1
2	Give two examples for uniform motion.	1
3	Name the device used to measure the speed of a car?	1
4	Which physical quantity is obtained by taking the slope of distance –time graph?	1
5	Draw the graphs which indicates (a) positive velocity (b) constant velocity	1
6	Give an example for a situation in which distance is equal to displacement.	1
7	Name the quantity which changes in uniform circular motion.	1
8	A racing car has a uniform acceleration of 4 m/s^2 . What distance will it cover in 10 s ?	2
9	'Rest and motion are relative'. Justify the statement with an example.	2
10	Differentiate distance and displacement.	2
11	A body moves in a circle of radius 2R What is the distance covered and displacement of the body after two complete rounds?	2
12	A body covers one revolution around a circular park of circumference 176 m in 4 minutes .Find the displacement of a body after 6 minutes.	2
13	When does the body has uniform velocity and variable velocity?	2
14	Arrange the following speed in increasing order 1. Bicycle moving with a speed of 18 km/h. 2. A fast runner running with a speed of 7 m/s 3. A car moving with a speed of 2000m/minute.	3

15	A 100 m long train crosses a 300 m long bridge at a speed of 90 km/h. How much time will it take to cross the bridge completely?	3														
16	A moving train is brought to rest within 20 s by applying brake. Find initial velocity if the retardation due to brake is 1.5 m/s^2 .	3														
17	Find the total displacement of the body from the following graph: 	3														
18	A farmer moves along the boundary of a square field of side 10 m in 40 s. What will be the magnitude of displacement of the farmer at the end of 2 minutes 20 seconds from his initial position? 	3														
19	Draw velocity –time graph using the following data and answer the following questions by analyzing the graph. 1. Which part of the graph shows accelerated motion? 2. Which part of the graph shows retarded motion? 3. Calculate the distance travelled by the body in first four seconds. <table border="1" data-bbox="236 1630 1273 1753"> <tbody> <tr> <td>Velocity(m/s)</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> <td>6</td> </tr> <tr> <td>Time(s)</td> <td>2</td> <td>4</td> <td>6</td> <td>8</td> <td>10</td> <td>14</td> </tr> </tbody> </table>	Velocity(m/s)	1	2	3	4	5	6	Time(s)	2	4	6	8	10	14	3
Velocity(m/s)	1	2	3	4	5	6										
Time(s)	2	4	6	8	10	14										
20	1. What you mean by equations of motion? 2. Write the three equations of motion and specify each term with unit. 3. Derive Position-velocity equation using velocity time graph.	3														