STATE COUNCIL OF EDUCATIONAL RESEARCH & TRAINING

TELANGANA, HYDERABAD.

ACADEMIC YEAR 2020-21

Class: IX **LEVEL-2** **Subject: Physical Science**

Name of the lesson: MOTION. Topic: Uniform Motion **WORKSHEET: 14**

KEY CONCEPT

- **Uniform Motion.**

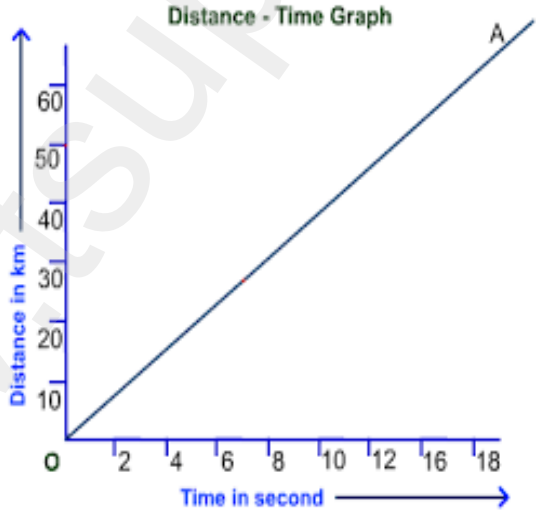
LEARNING OUTCOMES

Students can,

1. Describe Uniform motion
2. Can give examples for uniform motion.
3. Draws the graphs based on information given to understand uniform motion.

Consider a body moving along a straight line. Let it travel 10m in the first 2second, 10m in next 2second and so on. Observe the following tabular form showing the distances covered by a body moving along a straight-line direction in a given interval of time, and position-time graph is plotted with these values

Time in sec	Position in mts
2	10
4	20
6	30
8	40
10	50



Uniform Motion: If a body moving along straight-line direction covers equal distances in equal intervals of time, however small these intervals of time then the body is said to be in Uniform motion

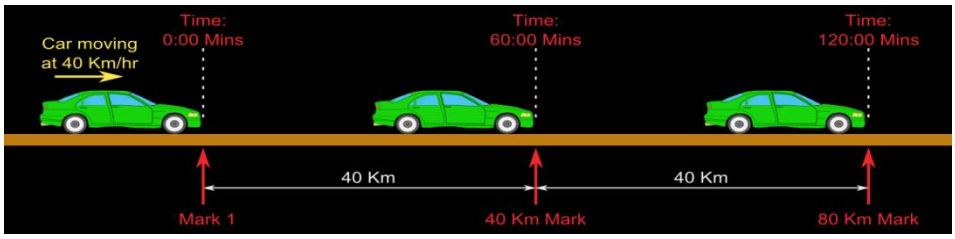
i.e. ; In Uniform motion the speed and direction of motion of a body remains same

(OR)

In Uniform motion the Velocity of a body remains same or constant

- **Examples of Uniform motion:**

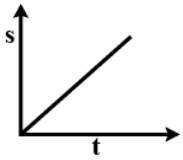
1) A car going along a straight level road at a steady speed .



2) A vibrating spring in a sewing machine.

3) An airplane cruising at a level height and a steady speed.

- During Uniform motion the position-time graph is straight line inclined to time axis



DO YOU KNOW

In Uniform motion average velocity and instantaneous velocity are equal in magnitude.

Think and Discuss

In Uniform motion the Velocity-Time graph is a straight line parallel to time axis. Why?

ASSESSMENT

1. What will be the nature of the position-time graph in Uniform motion?
2. What does the path of an object look like when it is in uniform motion?
3. What do you say about the motion of an object if its velocity –time graph is a straight line parallel to the time axis?

4. Draw the Distance -Time graph from the following data.

Distance in metre	5	10	15	20	25	30	35	40	45
Time in second	1	2	3	4	5	6	7	8	9

4 If the average and instantaneous velocity are equal in magnitude then the motion is

A) Uniform B) Non-Uniform

C) Either Uniform or Non-uniform D) Circular motion

5 Choose the wrong statement and rewrite it correctly

A) When a body is thrown vertically up then the motion is Uniform.

B) The nature of position-time graph under uniform motion is a straight line

****