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SHAKTI UTTAN ASHRAM, LAKHISARAI, PIN:-811311

SUBJECT:- PHYSICS

CLASS:- IXTH

DATE :- 19/08/XXI

SUBJECT TEACHER:- MR. NEEL NIRANJAN

CHAPTER 1. (MOTION)(BASED ON NCERT PATTERN)

Rest: An object is said to be at rest if it does not change its position with respect to its surroundings with time.

book lying on the table will not change its position if not disturbed. So, it is in a state of rest.

Motion: An object is said to be in motion if the position changes with respect to it surrounding and time.

When a moving car changes its position with respect to a tree or a lamp post by the side of the road, the car is said to be in motion.

Distance:- total path covered by an object is said to be the distance travelled by it.

Displacement:- The shortest path/distance measured from the initial to the final position of an object is known as the displacement.

Uniform motion: When an object covers equal distances in equal intervals of time, it is said to be in uniform motion.

Non-uniform motion :- Motions where objects cover unequal distances in equal intervals of time.

Speed: The distance travelled by an object in unit time is referred to as speed.

Average speed: For non-uniform motion, the average speed of an object is obtained by dividing the total distance travelled by an object by the total time taken.

$$\text{Average speed (v)} = \frac{\text{Total distance travelled(s)}}{\text{Total time taken (t)}}$$