VIDYA BHAVAN, BALIKA VIDYAPEETH

SHAKTI UTTHAN ASHRAM, LAKHISARAI, PIN:-811311

SUBJECT:- PHYSICS **CLASS:- IXTH** **DATE:- 26 /04/XXI**

SUBJECT TEACHER:- MR. NEEL NIRANJAN

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

1. Distinguish between speed and velocity.

Answer:

Speed	Velocity
Speed is the distance travelled by an object in a given interval of time.	Velocity is the displacement shown by an object in a given interval of time.
Speed = Distance / Time	Velocity = Displacement / Time
Speed is scalar quantity and has only magnitude.	Velocity is vector quantity and has both magnitude and direction.

2. Under what condition(s) is the magnitude of average velocity of an object equal to its average speed?

Answer: The magnitude of average velocity of an object is equal to its average speed, only in one condition when an object is moving in a straight line.

3. What does the odometer of an automobile measure?

Answer: The odometer of an automobile measures the distance covered by a vehicle or an automobile.

4. What does the path of an object look like when it is in uniform motion?

Answer: An object with uniform motion has a straight line path.

5. During an experiment, a signal from a spaceship reached the ground station in five minutes. What was the distance of the spaceship from the ground station? The signal travels at the speed of light, that is, 3 × 108 m s^{-1}.

Answer:- Speed= 3 × 108 m s^{-1} , Time= 5 min = 5 *60 = 300 seconds.

Distance= Speed * Time

Distance= 3 * 10^{8} m s^{-1} * 300 secs. = 9 x 10^{10}m