

**BRAIN INTERNATIONAL SCHOOL**

PHYSICS ASSIGNMENT

CLASS IX

APRIL 2018

Q1. Is it possible that the train in which you are sitting appears to move while it is at rest?

Q2. If on a round trip you travelled 6 Km and then arrive back home, calculate your displacement after completing the trip?

Q3. What is the numerical ratio of average velocity to average speed of an object when it is moving along a straight path?

Q4. A train starting from a railway station attains a velocity of 30m/s in 1 minute.

What is its acceleration?

Q5. What is the direction of velocity of an object moving along a circular path?

Q6. The length of minute hand of a clock is 14 cm. Calculate the speed with which the tip of the minute hand moves?

Q7. A person moves a distance of 3 km towards east, then 2 Km towards north and 3.5 Km towards east. Find : a) the distance covered by the person b) the displacement of this motion.

Q8. What can you say about the motion of the object whose distance-time graph is (a) a straight line parallel to the time axis (b) a straight line passing through the origin making an angle  $\theta$  from the time axis.

Q9. An object starts linear motion with a velocity “u” and under uniform acceleration “a”. It acquires a velocity “v” in time “t”. Draw velocity- time graph. From this graph obtain the following equations:  $v = u + at$

$$s = ut + \frac{1}{2} at^2$$

Q10. Study the velocity-time graph of the given figure and calculate,

- (a) Acceleration from A to B.
- (b) Acceleration from B to C.
- (c) Distance covered in the region ABD.
- (d) Average velocity from C to D.
- (e) Distance covered in region BCFE.

