INDIAN SCHOOL NIZWA

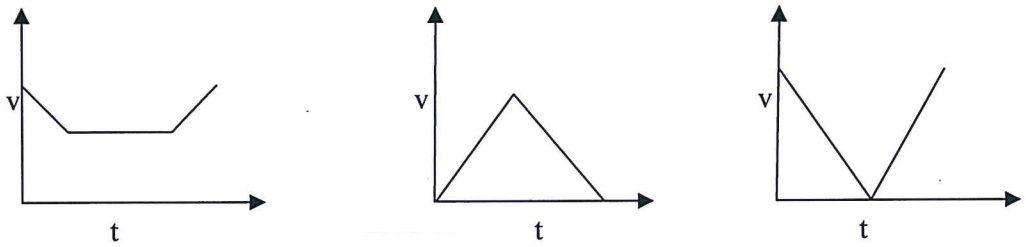
PHYSICS WORKSHEET

CHAPTER 8 MOTION

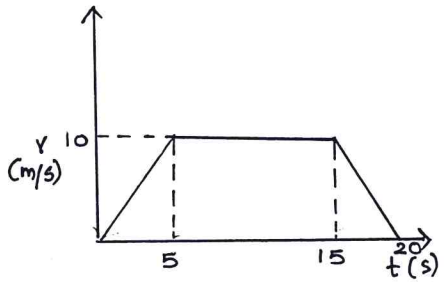
DATE : NAME : CLASS : IX

Fill in the blanks with suitable words

1. Displacement is a .....quantity whereas distance is a .....quantity.
2. The physical quantity which gives both , speed and direction of motion of a body is called its .....
3. A motorcycle has a steady .....of $3m/s^2$. This means that every ..... its ..... increases by .....
4. Velocity is the rate of change of ..... It is measured in .....
5. Acceleration is the rate of change of ..... It is measured in .....
6. If a body moves with uniform velocity , its acceleration is .....
7. Describe the motion of a body which is accelerating at a constant rate of $10m/s^2$. If the body start from rest , how much distance will it cover in this time?
8. What is meant by uniform circular motion? Give two examples of uniform circular motion.
9. A body is moving uniformly in a straight line with a velocity of 5m/s. Find graphically the distance covered by it in 5s.
10. Three speed time graph is shown . which of them represents the case of :
    (a) A cricket ball thrown vertically upwards and returning to the hands of the thrower.
    (b) A trolley decelerating to a constant speed and then accelerating uniformly.



11. Study the speed – time graph of a body give here and answer the following questions:



(a) What type of motion is represented by OA, AB, BC?

(b) Find out the acceleration of the body.

(c) Calculate the retardation of the body.

(d) Find out the distance travelled by the body from A to B.

12. A car travelling along the road at 8m/s. It accelerates at $1m/s^2$ for a distance of 18m. How fast is it then travelling?
13. A motor cycle moving with a speed of 5m/s is subjected to an acceleration of $0.2m/s^2$. Calculate the speed of the motorcycle after 10s, and the distance travelled in this time.
14. A cheetah starts from rest, and accelerates at $2m/s^2$ for 10s. Calculate:
    (a) The final velocity
    (b) The distance travelled.
15. A train travelling at 20m/s accelerates at $0.5m/s^2$ for 30s. How far will it travel in this time?