



G-W CLASSES, GONDIA

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CHAPTER-MOTION

GWPP-02

CLASS-IX

SUBJECT-SCIENCE

1. What does the slope of velocity – time graph give?
(a) Distance (b) displacement (c) Acceleration (d) Change in velocity. [1]
2. The displacement of the body can be-
(a) Positive (b) negative (c) Zero (d) All of these. [1]
3. Which of the following gives both direction and magnitude-
(a) scalar (b) vector (c) Both (d) None. [1]
4. If a moving body comes to rest, then its acceleration is-
(a) Positive (b) negative
(c) Zero (d) All of these depending upon initial velocity. [1]
5. A body is moving with a velocity of 12m/s and it comes to rest in 18m, what was the acceleration? [2]
6. A body starts from rest and moves with a uniform acceleration of 4m/s^2 until it travels a distance of 800 m, find the final velocity? [2]
7. The driver of a car traveling along a straight road with a speed of 72Kmph observes a signboard which gives the speed limit to be 54Kmph. The signboard is 70m ahead when the driver applies the brakes. Calculate the acceleration of the car which will cause the car to pass the signboard at the stated speed limit? [3]
8. Differentiate between scalars and vectors? [2]
9. The displacement x of a particle in meters along the x -axis with time ' t ' in seconds according to the equation- $X = 20\text{m} + (12\text{m/s})t$ (a) draw a graph of x versus t for $t = 0$ and $t = 5$ sec (b) What is the displacement come out of the particles initially? (c) What is slope of the graph obtained? [3]
10. The velocity of a body in motion is recorded every second as shown calculate the – (a) Acceleration (b) distance travelled and draw the graph. [3]

Time	0	1	2	3	4	5	6	7	8
velocity	62	54	48	42	36	30	24	18	12

11. Draw the graph for uniform retardation –
(a) position – time graph (b) velocity – time (c) Acceleration- time [3]
13. Derive the third equation of motion- $v^2 - u^2 = 2as$ graphically? [3]