

## Worksheet: Motion in a Straight Line

Rajasthan State Board · Class 11 · Physics · 5 questions · 13 marks

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Score: \_\_\_\_\_ / 13

**Q1.** Can an object have zero velocity but non-zero acceleration? Give an example. *[2 marks]*

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**Q2.** A particle moves with  $v = 10 + 2t$  m/s. Find the displacement from  $t = 0$  to  $t = 5$  s. *[3 marks]*

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**Q3.** A car moving at 72 km/h stops in 50 m. Find the deceleration. *[2 marks]*

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**Q4.** Two 100 m trains move at 54 km/h and 72 km/h in opposite directions on parallel tracks. Find the crossing time. *[3 marks]*

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**Q5.** A stone is dropped from an 80 m tower. Find the time to reach the ground and the impact speed ( $g = 10$  m/s<sup>2</sup>). *[3 marks]*

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