

## Worksheet: Waves

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

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

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

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

**Q1.** Two tuning forks of 256 Hz and 260 Hz sound together. Find the beat frequency. *[2 marks]*

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**Q2.** A 1 m string ( $\mu = 0.01$  kg/m,  $T = 100$  N) is fixed at both ends. Find the fundamental frequency. *[3 marks]*

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**Q3.** A source moving at 30 m/s emits 500 Hz toward a stationary observer ( $v = 340$  m/s). Find the apparent frequency. *[3 marks]*

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**Q4.** Find the third harmonic of a 50 cm open organ pipe ( $v = 340$  m/s). *[2 marks]*

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**Q5.** Waves  $y_1 = 0.05 \sin(200t - 5x)$  and  $y_2 = 0.05 \sin(200t + 5x)$  superpose. Find the standing wave and node positions. *[3 marks]*

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