

## Smartborn

Chord Road West of Chord Road 2nd Stage Nagapura Bengaluru, Arisinakunte, Karnataka 560086

### Test: derftgyhjkml

Duration: 60 minutes | Total Marks: 100

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**Q1. A particle is projected with velocity  $(u)$  at an angle  $(\theta)$  to the horizontal from the top of a tower of height  $(h)$ . The horizontal distance from the foot of the tower to the point where it hits the ground is maximum when  $(\theta)$  satisfies which condition?**

- A)  $\tan \theta = \frac{u^2}{u^2 + 2gh}$
- B)  $\theta = 45^\circ$
- C)  $\tan \theta = \frac{1}{\sqrt{1 + \frac{2gh}{u^2}}}$
- D)  $\cot \theta = 1 + \frac{2gh}{u^2}$

# Answer Key

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Q1. Answer: A