Course Code: ESC106A
Course Title: Construction Materials and Engineering Mechanics

Lecture No. 58:
Numerical on Projectiles

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Lecture Intended Learning Outcomes

At the end of this lecture, student will be able to:

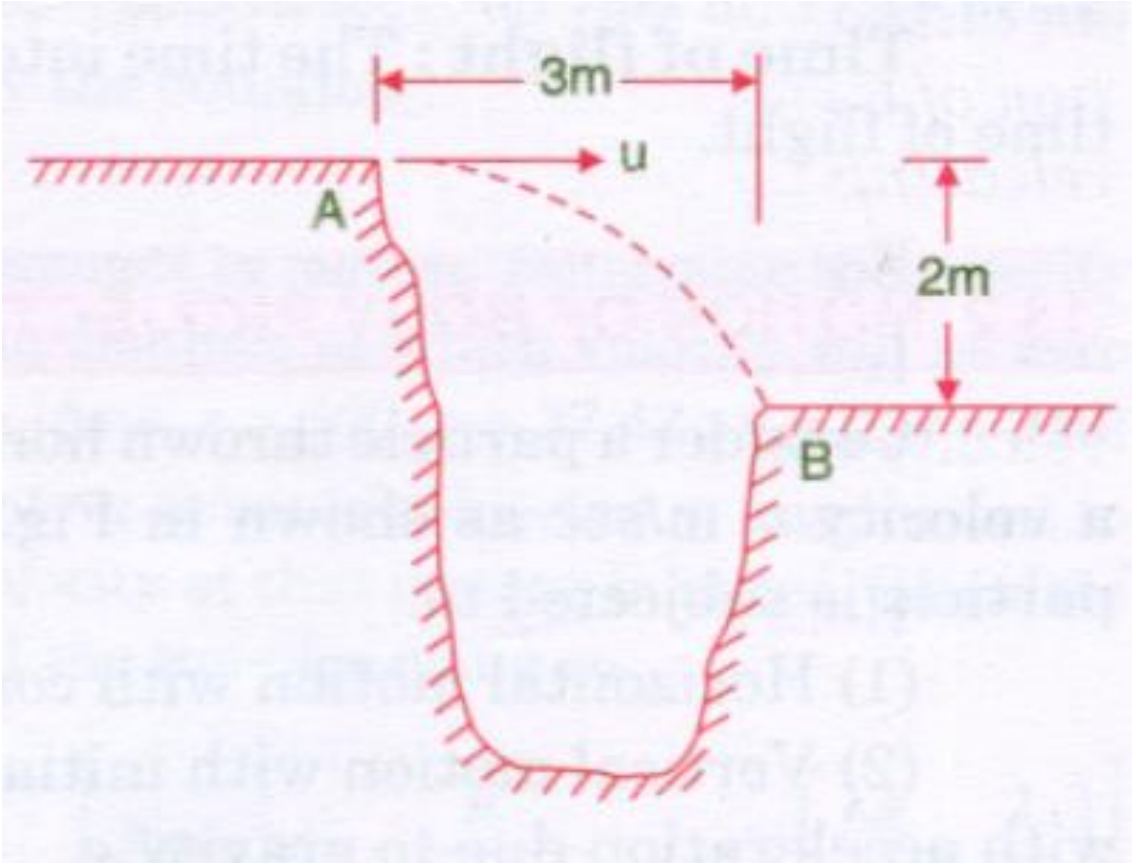
- Solve problems on horizontal projection, inclined projection on both horizontal and inclined plane are analyzed neglecting air resistance

Contents

- Numerical problems on projectiles

Projectiles: Problem 1

Example: A person wants to jump over a ditch as shown in figure Find the minimum velocity with which he should jump



Projectiles: Problem 2

Example: A pilot flying his bomber at a height of 6000 m with a uniform horizontal velocity of 600 kmph wants to strike a target. At what distance from the target, he should release the bomb ?

Summary

- The horizontal distance through which the projectile travels in its flight is called the horizontal range or simply range of the projectile
- The time interval during which the projectile is in motion is called the time of flight