

NAME:OSAMOR EBUBE

DEPT:MECHATRONICS

MATRIC NO:2022/11123

DATE:2/12/22

## PROJECTILE MOTION

A Projectile is an object or body launched into the air and allowed to move on its own or move freely under gravity.examples a shot arrow,a thrown javelin etc.

time of flight is the time required for a projectile to return to the same level from which it was projected.

$$T = 2U \sin \theta / g$$

the maximum height attained is the highest vertical distance attained by the projectile as measured from the horizontal projection plane.

$$H = U^2 \sin^2 \theta / 2g$$

The range is defined as the horizontal distance from the point of projection to the point where the projectile hits the projection plane again.

$$R = \frac{U^2 \sin 2\theta}{g}$$