



DPP - 5

- Q 1. A projectile fired with initial velocity u at some angle θ has a range R . If the initial velocity be doubled at the same angle of projection, then the range will be:
(a) $2R$ (b) $R/2$
(c) R (d) $4R$
- Q 2. A ball is thrown with an initial velocity of 100m/s at an angle of 30° above the horizontal. How far from the throwing point will the ball attain its original level? ($g = 10\text{ m/s}^2$)
(a) $50\sqrt{3}\text{ m}$ (b) 486 m
(c) 866 m (d) 746 m
- Q 3. The greatest height to which a man can throw a stone is h . The greatest distance to which he can throw it, will be?
(a) $h/2$ (b) h
(c) $2h$ (d) $3h$
- Q 4. The range of a projectile for a given initial velocity is maximum when the angle of projection is 45° . The range will be minimum, if the angle of projection is:
(a) 90° (b) 180°
(c) 60° (d) 75°
- Q 5. A stone is projected from the ground with velocity 25 m/s . Two seconds later, it just clears a wall 5 m high. The angle of projection of the stone is: ($g = 10\text{ m/s}^2$)
(a) 30° (b) 45°
(c) 50.2° (d) 60°
- Q 6. Galileo writes that for angles of projection of a projectile at angles $(45^\circ + \theta)$ and $(45^\circ - \theta)$, the horizontal ranges described by the projectile are in the ratio of: ($\theta < 45^\circ$)
(a) $2:1$ (b) $1:2$
(c) $1:1$ (d) $2:3$
- Q 7. The equation of trajectory of a projectile is $y = 10x - \left(\frac{5}{9}\right)x^2$. If we assume $g = 10\text{ m/s}^2$, the range of projectile (in meters) is:
(a) 36 (b) 18
(c) 24 (d) 9



- Q 8. A projectile can have the same range R for, two angles of projection at a given speed. If T_1 and T_2 be the times of flight in two cases, then find out relation between T_1 , T_2 and R :
- (a) $R = T_1 T_2 \frac{g}{2}$ (b) $R = T_1 T_2 \frac{2}{g}$
(c) $T_1 T_2 = \frac{R}{g}$ (d) $R = \frac{T_1 T_2}{g}$
- Q 9. A body is projected with initial velocity of $(8\hat{i} + 6\hat{j}) \text{ m/s}$. The horizontal range is? ($g = 9.8 \text{ m/s}^2$)
- (a) 9.6 m (b) 14 m
(c) 50 m (d) 19.2 m
- Q 10. If time of flight of a projectile is 10 seconds. Range is 500 m. The maximum height attained by it will be:
- (a) 50 m (b) 100 m
(c) 125 m (d) 150 m
- Q 11. An aeroplane is flying horizontally with a velocity of 600 km/h at a height of 1960 m . When it is vertically at a point A on the ground, a bomb is released from it. The bomb strikes the ground at point B. The distance AB is:
- (a) 1200 m (b) 0.33 km
(c) 3.33 km (d) 33 km

Solution on Website:-

<https://physicsaholics.com/home/courseDetails/41>

Solution on YouTube:-

<https://youtu.be/kClwa-XyH2I>

Answer Key

Q.1) d	Q.2) c	Q.3) c	Q.4) a	Q.5) a
Q.6) c	Q.7) b	Q.8) a	Q.9) a	Q.10) c
Q.11) c				