

# PYQSide

## JEE MAIN MOTION IN A STRAIGHT LINE — MOTION UNDER GRAVITY (FREE FALL) — PYQS

Max. Marks: 12

Questions: 3

### Section A (MCQ)

- Q.1** A gas balloon is going up with a constant velocity of 10 m/s. When this balloon reached a height of 75 m, a stone is dropped from it and balloon keeps moving up with the same velocity. The height of the balloon when the stone hits the ground is \_\_\_\_\_ m. (Take  $g = 10 \text{ m/s}^2$ )

[JEE Main 2026 (Online) 8th April Evening Shift]

- (1) 85      (2) 150      (3) 129      (4) 125

Scan or tap for the full solution



- Q.2** Water drops fall from a tap on the floor, 5 m below, at regular intervals of time, the first drop strikes the floor when the sixth drop begins to fall. The height at which the fourth drop will be from ground, at the instant when the first drop strikes the ground is \_\_\_\_\_ m. ( $g = 10 \text{ m/s}^2$ )

[JEE Main 2026 (Online) 28th January Morning Shift]

- (1) 3.8      (2) 4.0      (3) 4.2      (4) 2.5

Scan or tap for the full solution



### Section B (Numerical)

- Q.3** From 18 m height above the ground a ball is dropped from rest. The height above the ground at which the magnitude of velocity equal to the magnitude of acceleration (in the same set of units) due to gravity is \_\_\_\_\_ m. (Take  $g = 10 \text{ m/s}^2$  and neglect the air resistance)

[JEE Main 2026 (Online) 5th April Morning Shift]

Scan or tap for the full solution



### ANSWER KEY

#### Section A (MCQ)

|       |   |   |  |  |  |  |  |  |  |  |  |
|-------|---|---|--|--|--|--|--|--|--|--|--|
| Ques. | 1 | 2 |  |  |  |  |  |  |  |  |  |
| Ans.  | 4 | 3 |  |  |  |  |  |  |  |  |  |

#### Section B (Numerical)

|       |    |  |  |  |  |  |  |  |  |  |  |
|-------|----|--|--|--|--|--|--|--|--|--|--|
| Ques. | 3  |  |  |  |  |  |  |  |  |  |  |
| Ans.  | 13 |  |  |  |  |  |  |  |  |  |  |