

JEE MAIN OSCILLATIONS — SIMPLE HARMONIC MOTION AND ITS EQUATION — PYQS

Max. Marks: 8

Questions: 2

Section A (MCQ) — 2 questions

- Q.1** A particle is executing simple harmonic motion. Its amplitude is A and time period is 5 sec. The time required by it to move from $x = A$ to $x = \frac{A}{\sqrt{2}}$ is _____ sec.

[JEE Main 2026 (Online) 6th April Morning Shift]

- (1) $1/4$ (2) $5/4$ (3) $5/8$ (4) $3/8$

Scan or tap for the
full solution



- Q.2** Given below are two statements. One is labelled as **Assertion (A)** and the other is labelled as **Reason (R)**.

Assertion (A): Knowing initial position x_0 and initial momentum p_0 is enough to determine the position and momentum at any time t for a simple harmonic motion with a given angular frequency ω .

Reason (R): The amplitude and phase can be expressed in terms of x_0 and p_0 .

In the light of the above statements, choose the **correct** answer from the options given below :

[JEE Main 2025 (Online) 28th January Evening Shift]

- (1) (A) is true but (R) is false
 (2) Both (A) and (R) are true but (R) is NOT the correct explanation of (A)
 (3) (A) is false but (R) is true
 (4) Both (A) and (R) are true and (R) is the correct explanation of (A)

Scan or tap for the
full solution



ANSWER KEY

Ques.	1	2									
Ans.	3	4									