

# PYQSide

## JEE MAIN GRAVITATION — KEPLER'S LAWS — PYQS

Max. Marks: 8

Questions: 2

### Section A (MCQ)

- Q.1** A planet ( $P_1$ ) is moving around the star of mass  $2M$  in the orbit of radius  $R$ . Another planet ( $P_2$ ) is moving around another star of mass  $4M$  in an orbit of radius  $2R$ . Ratio of time periods of revolution of  $P_2$  and  $P_1$  is \_\_\_\_\_.

[JEE Main 2026 (Online) 2nd April Morning Shift]

- (1)  $\frac{1}{2}$       (2) 2      (3) 4      (4)  $\frac{1}{4}$

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):** The radius vector from the Sun to a planet sweeps out equal areas in equal intervals of time and thus areal velocity of planet is constant.

**Reason (R):** For a central force field the angular momentum is a constant.

In the light of the above statements, choose the most appropriate answer from the options given below:

[JEE Main 2025 (Online) 7th April Evening Shift]

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

Scan or tap for the  
full solution



### ANSWER KEY

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