

## JEE MAIN SETS — PYQS

Max. Marks: 16

Questions: 4

## Section A (MCQ) — 3 questions

- Q.1** Let  $A = \{x: |x^2 - 10| \leq 6\}$  and  $B = \{x: |x - 2| > 1\}$ .  
Then [JEE Main 2026 (Online) 21st January Evening Shift]  
(1)  $A \cup B = (-\infty, 1] \cup (2, \infty)$   
(2)  $B - A = (-\infty, -4) \cup (-2, 1) \cup (4, \infty)$   
(3)  $A - B = [2, 3]$   
(4)  $A \cap B = [-4, -2] \cup [3, 4]$

Scan or tap for the  
full solution

- Q.2** Let  $A = \{(\alpha, \beta) \in \mathbb{R} \times \mathbb{R} : |\alpha - 1| \leq 4 \text{ and } |\beta - 5| \leq 6\}$   
and  
 $\text{mathrm{B}} = \{(\alpha, \beta) \in \mathbb{R} \times \mathbb{R} : 16(\alpha - 2)^2 + 9(\beta - 6) \leq 144\}$ .  
Then [JEE Main 2025 (Online) 7th April Evening Shift]  
(1)  $A \subset B$   
(2)  $B \subset A$   
(3) neither  $A \subset B$  nor  $B \subset A$   
(4)  $A \cup B = \{(x, y) : -4 \leq x \leq 4, -1 \leq y \leq 11\}$

Scan or tap for the  
full solution

- Q.3** Let  $A = \{1, 6, 11, 16, \dots\}$  and  
 $B = \{9, 16, 23, 30, \dots\}$  be the sets consisting of the  
first 2025 terms of two arithmetic progressions.  
Then  $n(A \cup B)$  is  
[JEE Main 2025 (Online) 4th April Morning Shift]  
(1) 3814    (2) 4003    (3) 4027    (4) 3761

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full solution

## Section B (Numerical) — 1 question

- Q.4** Let  $S$  be the set of the first 11 natural numbers. Then  
the number of elements in  
 $A = \{B \subseteq S : n(B) \geq 2 \text{ and the product of all elements  
of } B \text{ is even}\}$  is \_\_\_\_\_.  
[JEE Main 2026 (Online) 22nd January Evening Shift]

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full solution

## ANSWER KEY

## Section A (MCQ) — 3 questions

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

## Section B (Numerical) — 1 question

| Ques. | 4    |  |  |  |  |  |  |
|-------|------|--|--|--|--|--|--|
| Ans.  | 1979 |  |  |  |  |  |  |