

## PART 1 - MATHEMATICS

Topic : Binomial theorem

## SECTION-B : (Maximum Marks : 4)

This section contains **ONE** question.

The answer to each question is a **NON-NEGATIVE INTEGER**.

For each question, enter the correct integer corresponding to the answer in the place designated to enter the answer.

Answer to each question will be evaluated according to the following marking scheme :

Full Marks : +4 If **ONLY** the correct answer is entered;

Zero Marks : 0 In all other cases.

1. Let  $a_0, a_1, \dots, a_{23}$  be real numbers such that

$$\left(1 + \frac{2}{5}x\right)^{23} = \sum_{i=0}^{23} a_i x^i$$

for every real number  $x$ . Let  $a_r$  be the largest among the numbers  $a_j$  for  $0 \leq j \leq 23$ .

Then the value of  $r$  is \_\_\_\_\_.

[JEE Advanced 2025 Paper 2]

Scan or tap for the  
full solution



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Space for Rough Work

JEE ADVANCED BINOMIAL THEOREM — GREATEST TERM AND GREATEST COEFFICIENT (JEE) — PYQS

Test Pattern : JEE (Advanced)

ANSWER KEY

| SECTION-B |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Ques.     | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Ans.      | 6 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |