

PART 1 - MATHEMATICS

Topic : Permutations and combinations

SECTION-B : (Maximum Marks : 12)

- This section contains **THREE** questions.
- 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. The number of ways to distribute 10 identical red pens and 14 identical blue pens among four persons such that each person gets 6 pens, is _____.

[JEE Advanced 2026 Paper 1]

Scan or tap for the
full solution

2. Let S be the set of all seven-digit numbers that can be formed using the digits 0, 1 and 2. For example, 2210222 is in S , but 0210222 is NOT in S .

Then the number of elements x in S such that at least one of the digits 0 and 1 appears exactly twice in x , is equal to _____.

[JEE Advanced 2025 Paper 1]

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full solution

3. A group of 9 students, $s_1, s_2, \dots, s_9$, is to be divided to form three teams X, Y , and Z of sizes 2, 3, and 4, respectively. Suppose that s_1 cannot be selected for the team X , and s_2 cannot be selected for the team Y . Then the number of ways to form such teams, is _____.

[JEE Advanced 2024 Paper 1]

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full solution

Space for Rough Work

JEE ADVANCED PERMUTATIONS AND COMBINATIONS —
PYQS

Test Pattern : JEE (Advanced)

ANSWER KEY

SECTION-B																											
Ques.	1	2	3																								
Ans.	206	762	665																								