JEE ADVANCED SUPER 25 REVISION SERIES

PERMUTATIONS AND COMBINATIONS

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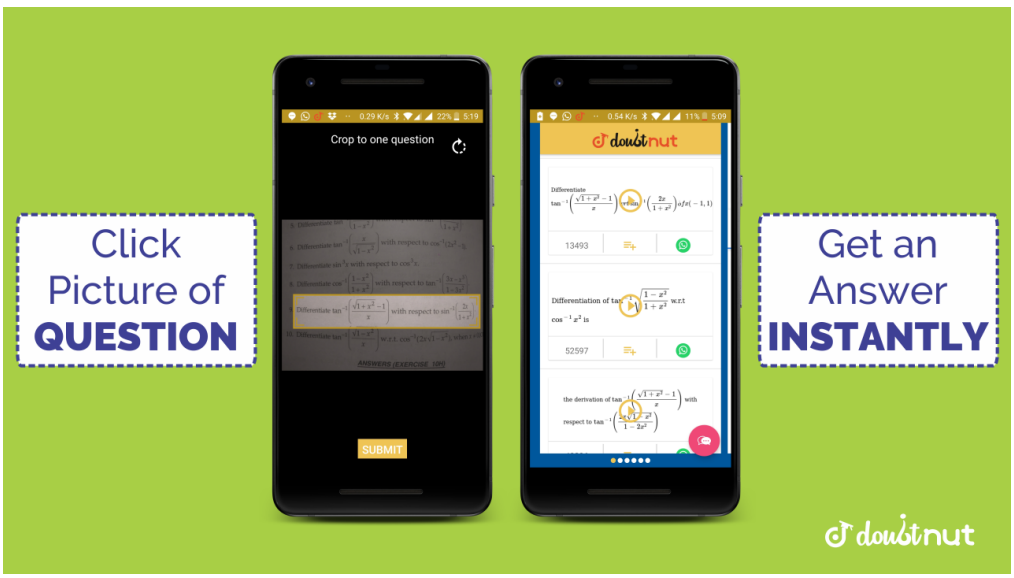
Ques No.	Question
1 - 23513	**JEE ADVANCED SUPER 25 REVISION SERIES - PERMUTATIONS AND COMBINATIONS** Word of length 10 are formed using the letters A,B,C,D,E,F,G,H,I,J. Let x be the number of such words where no letter is repeated; and let y be the number of such words where exactly one letter is repeated twice and no other letter is repeated. The, $\frac{y}{9x} =$ Watch Free Video Solution on Doubtnut
2 - 30331	**JEE ADVANCED SUPER 25 REVISION SERIES - PERMUTATIONS AND COMBINATIONS** The number of triangles that can be formed with 10 points as vertices n of them being collinear, is 110. Then n is a. 3 b. 4 c. 5 d. 6 Watch Free Video Solution on Doubtnut
3 - 30475	**JEE ADVANCED SUPER 25 REVISION SERIES - PERMUTATIONS AND COMBINATIONS** A box contains two white balls, three black balls, and four red balls. In how many ways can three balls be drawn from the box if at least one black ball is to be included in the draw? Watch Free Video Solution on Doubtnut
4 - 30526	**JEE ADVANCED SUPER 25 REVISION SERIES - PERMUTATIONS AND COMBINATIONS** In how many ways can two distinct subsets of the set A of $k(k \geq 2)$ elements be selected so that they haves exactly two common elements? Watch Free Video Solution on Doubtnut

5 - 30542	**JEE ADVANCED SUPER 25 REVISION SERIES - PERMUTATIONS AND COMBINATIONS** How many five-digit numbers can be made having exactly two identical digits? Watch Free Video Solution on Doubtnut
6 - 30707	**JEE ADVANCED SUPER 25 REVISION SERIES - PERMUTATIONS AND COMBINATIONS** Total number of six-digit numbers that can be formed having the property that every succeeding digit is greater than the preceding digit is equal to a. ^ $9C_3$ b. ^ $10C_3$ c. ^ $9p_3$ d. ^ $10p_3$ Watch Free Video Solution on Doubtnut
7 - 30806	**JEE ADVANCED SUPER 25 REVISION SERIES - PERMUTATIONS AND COMBINATIONS** The total number of ways of selecting six coins out of 20 one-rupee coins, 10 fifty-paisa coins, and 7 twenty-five paisa coins is a. 28 b. 56 c. ^ $37C_6$ d. none of these Watch Free Video Solution on Doubtnut
	
8 - 30857	**JEE ADVANCED SUPER 25 REVISION SERIES - PERMUTATIONS AND COMBINATIONS** The total number of three-letter words that can be formed from the letter of the word SAHARANPUR is equal to a. 210 b. 237 c. 247 d. 227 Watch Free Video Solution on Doubtnut
9 - 30896	**JEE ADVANCED SUPER 25 REVISION SERIES - PERMUTATIONS AND COMBINATIONS** Let T_n denote the number of triangles, which can be formed using the vertices of a regular polygon of n sides. It $T_{n+1} - T_n = 21$,then n equals a.5 b. 7 c. 6 d. 4 Watch Free Video Solution on Doubtnut
10 - 30920	**JEE ADVANCED SUPER 25 REVISION SERIES - PERMUTATIONS AND COMBINATIONS** To fill 12 vacancies there are 25 candidates of which 5 are from scheduled caste. If three of the vacancies are reserved for scheduled caste candidates while the rest are open to all; the number of ways in which the selection can be made is a. ^ $5C_3 \times^{22} C_9$ b. ^ $22C_9 -^5 C_3$ c. ^ $22C_3 +^5 C_3$ d. none of these

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11 - 30978

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In an election, the number of candidates is one greater than the persons to be elected. If a voter an vote in 254 ways, the number of candidates is a. 7 b. 10 c. 8 d. 6

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12 - 31059

JEE ADVANCED SUPER 25 REVISION SERIES - PERMUTATIONS AND COMBINATIONS

In a class tournament, all participants were to plan different game with one another. Two players fell ill after having played three games each. If the total number of games played in the tournament is equal to 84, the total number of participants in the beginning was equal to a. 10 b. 15 c. 12 d. 14

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13 - 31237

JEE ADVANCED SUPER 25 REVISION SERIES - PERMUTATIONS AND COMBINATIONS

Find the number of ways of selection of at least one vowel and one consonant from the word TRIPLE.

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14 - 31244

JEE ADVANCED SUPER 25 REVISION SERIES - PERMUTATIONS AND COMBINATIONS

A person invites a group of 10 friends at dinner and sits (i)5 on a round table and 5 more on another round table, (ii)4 on one round table and 6 on the other round table. Find the number of ways in each case in which he can arrange the guest.

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15 - 31274

JEE ADVANCED SUPER 25 REVISION SERIES - PERMUTATIONS AND COMBINATIONS

Find the number of ways in which 6 men and 5 women can dine at around table if no two women are to sit so together.

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16 - 31282

JEE ADVANCED SUPER 25 REVISION SERIES - PERMUTATIONS AND COMBINATIONS

Find the number of all three elements subsets of the set$\{a_1, a_2, a_3, \ldots\ldots\ldots\ldots . a_n\}$ which contain a_3.

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17 - 181394

JEE ADVANCED SUPER 25 REVISION SERIES - PERMUTATIONS AND COMBINATIONS

A debate club consists of 6 girls and 4 boys. A team of 4 members is to be selected from this club including the selection of a captain (from among these 4 members) for the team. If the team has to include at most one boy, then the number of ways of selecting the team is

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18 - 181438

JEE ADVANCED SUPER 25 REVISION SERIES - PERMUTATIONS AND COMBINATIONS

Let n be the number of ways in which 5 boys and 5 girls can stand in a queue in such a way that all the girls stand consecutively in the queue. Let m be the number in which 5 boys and 5 girls stand in such a way that exactly four girls stand consecutively in the queue. Then the value of $\frac{m}{n}$ is ____

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19 - 182657

JEE ADVANCED SUPER 25 REVISION SERIES - PERMUTATIONS AND COMBINATIONS

Let $n \geq 2$ be integer. Take n distinct points on a circle and join each pair of points by a line segment. Color the line segment joining every pair of adjacent points by blue and the rest by red. If the number of red and blue line segments are equal, then the value of n is

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20 - 182690	**JEE ADVANCED SUPER 25 REVISION SERIES - PERMUTATIONS AND COMBINATIONS** Six cards and six envelopes are numbered 1, 2, 3, 4, 5, 6 and cards are to be placed in envelopes so that each envelope contains exactly one card and no card is placed in the envelope bearing the same number and moreover cards numbered 1 is always placed in envelope numbered 2. Then the number of ways it can be done is a.264 b. 265 c. 53 d. 67 Watch Free Video Solution on Doubtnut
21 - 182745	**JEE ADVANCED SUPER 25 REVISION SERIES - PERMUTATIONS AND COMBINATIONS** The total number of ways in which 5 balls of differert colours can be distributed among 3 persons so thai each person gets at least one ball is Watch Free Video Solution on Doubtnut
22 - 183731	**JEE ADVANCED SUPER 25 REVISION SERIES - PERMUTATIONS AND COMBINATIONS** The letters of the word COCHIN are permuted and all the permutations are arranged in an alphabetical order s in an English dictionary. The number of words that appear before the word COCHIN is a.360 b. 192 c. 96 d. 48 Watch Free Video Solution on Doubtnut
23 - 184920	**JEE ADVANCED SUPER 25 REVISION SERIES - PERMUTATIONS AND COMBINATIONS** The number of seven digit integers, with sum of the digits equal to 10 and formed by using the digits 1, 2 and 3 only, is Watch Free Video Solution on Doubtnut
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24 - 1390485

JEE ADVANCED SUPER 25 REVISION SERIES - PERMUTATIONS AND COMBINATIONS

The number of 5 digit numbers which are divisible by 4, with digits from the set $\{1,\ 2,\ 3,\ 4,\ 5\}$ and the repetition of digits is allowed, is _____.

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25 - 1390486

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Let X be the set consisting of the first 2018 terms of the arithmetic progression $1,\ 6,\ 11,\ \ldots$ and Y be the set consisting of the first 2018 terms of the arithmetic progression $9,\ 16,\ 23,\ \ldots$. Then, the number of elements in the set $X \cup Y$ is _____.

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