


Permutation and Combination Practice Questions

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Permutation and combination is a very important topic in any competitive exams. We have covered this topic and all its sections in our earlier articles. Today we are going to discuss the permutation and combination practice questions. There are different types of practice questions for you to practice and get ready for the competitive exams.

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- Factorial Notation
- Permutations
- Number of Permutations
- Combination
- Number of Combination

Part 1

Permutation of 'x' things using all of them

Directions: For the questions in the section you need to find the distinctive ways to find the answer.

1. Using all the letters of the word GIFT how many distinct words can be formed?

- A. 22 words B. 24 words C. 256 words D. 200 words

2. Find out how many distinct three-digit numbers can be formed using all the digits of 1, 2, and 3.

- A. 4 B. 5 C. 6 D. 7

3. In how many different ways can five friends sit for a photograph of five chairs in a row?

- A. 120 ways B. 24 ways C. 240 ways D. 720 ways

4. In how many different ways can the letters of the word MAGIC can be formed?

- A. 24 ways B. 120 ways C. 240 ways D. 720 ways

5. For the above word how many different types of arrangement are possible so that the vowels are always together?

- A. 44 words B. 24 words C. 48 words D. 60 words

6. In how many ways can the letters of the word BEAUTY be arranged?

- A. 360 B. 5! C. 6! D. 7!

7. For the above word, if the vowels are always together than how many types of arrangement can be possible?

- A. $4! \times 3!$ B. 6! C. 4! D. $4! \times 3$

8. A person has 4 coins of different denominations. What is the number of different sums of money the person can form?

- A. 12 B. 15 C. 11 D. 16



Answer:

1. B 24
2. C 6
3. A 120 ways
4. B 120 ways
5. C 48 words
6. C 6!
7. A $4! \times 3!$
8. B 15

Part 2

Permutations of n things taking some of them at one time and when some things are alike

Directions: Answer the questions based on the data given to you

1. If repetition is not allowed then how many distinct three-digit numbers can be formed using the digits (1, 2, 3, 4, 5)?

- A. 60 ways B. 50 ways C. 40 ways D. 30 ways
2. Find out the distinct four-letter words that can be formed using the word SINGAPORE.
- A. 256 B. 1024 C. 3024 D. 2048
3. Find out how many distinct three-digit numbers can be formed using the digits 1, 2, 3, 4, 5, 6, 7, 8, 9 such that the digits are in ascending order.
- A. 80 B. 81 C. 83 D. 84
4. How many can 3 digits be formed using the digits from 1 to 5 if the digit 2 is never there in the number?
- A. 24 B. 36 C. 40 D. 52
5. If no repetition is not allowed then how many numbers between 2000 and 3000 can be formed using the digits from 0 to 7?
- A. 42 B. 336 C. 210 D. 440
6. In how many ways can Kamal choose a consonant and a vowel from the letters of the word ALLAHABAD?
- A. 4 B. 5 C. 6 D. 9
7. Find out the number of distinctive words that can be formed using the word GOOD.
- A. 16 B. 24 C. 28 D. 48
8. How many different words can be formed from the alphabets of the word SCISSORS?
- A. 1440 B. 1680 C. 1800 D. 2100
9. How many distinct words can be formed using the word MINIMUM?
- A. 420 B. 450 C. 1024 D. 1048

Answer:

1. A 60 ways
2. C 3024
3. D 84
4. A 24
5. C 210

6. A 4

7. B 24

8. B 1680

9. A 420

Part 3

Permutation when the repetition of the words are allowed

Directions: The questions in this section consists of the repetition of the words or letters or numbers or alphabets.

1. If repetition is allowed then how many different three digits numbers can be formed using the digits from 1 to 5?

A. 125 B. 27 C. 120 D. None of the above

2. In how many ways can two letters be selected from the English alphabet if repetition is allowed?

A. 650 B. 325 C. 52 D. 51

3. Priya has five friends in how many ways can she invited five or more friends for dinner?

A. 6 B. 7 C. 15 D. 21

4. When repetition is allowed, how many numbers between 2000 and 4000 can be selected from the digits 1 to 5?

A. 248 B. 249 C. 250 D. 128

5. How many can four digits be formed using the digits 0, 1, 2, and 3 (repetition is allowed)?

A. 12 B. 24 C. 256 D. 192

6. In a word jumble, there are 8 consonants and 5 vowels given. Find out in how many ways can we form a 5-letter word having three consonants and 2 vowels?

A. 67200 B. 8540 C. 720 D. None of these

7. There are 45 games in total in a competition. Many teams took part in the competition and each of them must play one with the other teams. In total how many teams took part in the competition?

A. 5 B. 10 C. 15 D. 20

Answer:

1. A 125
2. B 325
3. B 7
4. B 249
5. D 192
6. A 67200
7. B 10

Part 4

Different Types of Arrangement

Directions: In this section, you need to find out how many different types of arrangements are possible.

1. In how many ways can you select a diamond or a king from a pack of cards?
A. 16 B. 20 C. 24 D. 8
2. A circular table has 6 chairs, out of this 6, five are identical. In how many ways can the six people be arranged on these chairs?
A. 120 B. 720 C. 360 D. 60
3. Jay invited 10 of his friends on his birthday. If all of them greeted each other with a handshake then how many handshakes will take place?
A. 90 B. 110 C. 45 D. 55
4. In how many can the 4 couples sit around a circular table so that no two men are sitting together?
A. $7!$ B. $6!$ C. $3! * 4!$ D. $3! * 3!$
5. There are three dice each of them having faces with a number from 1 to 6. These dices are rolled. Find the number of possible outcomes such that at least one of the dice shows the number 2.
A. 36 B. 91 C. 81 D. 116

Answer:

1. A 16

2. B 720

3. A 90

4. C $3! \cdot 4!$

5. B 91