Permutation & Combination

Practice Exercise I

1) How many 3 – digit numbers can be formed using the digits 1, 2, 3, 4, 5, 6, 7 and 8 such that the numbers are divisible by 2 (repetition of digits is not allowed)?

a) 96 b) 168 c) 196 d) 120

2) Find the 4-digited numbers can be formed by using digits 0 to 9 such that are numbers are ending with odd digit (repetition of digits is allowed).

a) 5000 b) 10000 c) 4500 d) 4^{10}

3) How many 4 – digit numbers can be formed using the digits 1, 2, 3, 4, 5 and 6 such that the numbers are greater than 4000 (repetition of digits is allowed)?

a) 648 b) 360 c) 120 d) 864

4) Find the 10 – digit numbers can be formed using the digits 1, 2, 3 and 4 such that the numbers are divisible by 4 (repetition of digits is allowed)?

a) 4×4^8 b) 3×4^8 c) 5×4^{10} d) 4^{10}

5) How many secured passwords can be formed having one letter of English alphabet and followed by a three-digit number, if repetition and case sensitive is not allowed?

a) 26000 b) 18720 c) 18620 d) 21060

6) How many secured One-time passwords (OTP) can be formed containing numeral from 0 to 9?

a) 1000 b) 8900 c) 9000 d) 10000

7) An e-mail password must contain three characters. The password has to contain one numeral from 0 to 9, one upper case and one lower case character from the English alphabet. How many distinct passwords are possible? ***[GATE 2018/EE]***

a) 26,000 b) 13,520 c) 40,560 d) 1,05,456

8) How many vehicle registration plate numbers can be formed with digits 1, 2, 3, 4, 5 (no digits being repeated) if it is given that registration number can have 1 to 5 digited number plates? ***[TCS]***

a) 205 b) 100 c) 325 d) 120

9) How many three digit numbers can be formed using the digits 2, 3, 4, 6, 7 in which repetition of digits are allowed?

a) 125 b) 72 c) 36 d) 60

10) How many three digit numbers can be formed using the digits 1, 2, 3, 4, 5, 6 and 8 such that the numbers are divisible by 2? (Repetition of digits is not allowed)

a) 150 b) 100 c) 120 d) 60

11) How many 3 digit numbers can be formed from the digits 2, 3, 5, 6, 7 and 9, which are greater than 300 but not greater than 600 [None of the digits is repeated]?

a) 5 b) 10 c) 40 d) 20

12) Find the 4-digited numbers can be formed by using digits 1, 2, 4, 6 and 7 that are divisible by 4 (repetition of digits is allowed).

a) 150 b) 175 c) 125 d) None

13) How many 4-digit numbers can be formed using the digits 1, 2, 3, 5, 6, 8 such that the numbers are divisible by 5 (repetition of digits is not allowed)?

a) 24 b) 48 c) 120 d) 60

14) Find the number of 9 digit numbers formed 1, 2, 4, 5 and 8 which are divisible by 4, when repetition is allowed)? ***[TCS]***

a) 8×5^{10} b) 5^{10} c) 8×5^{7} d) 7×5^{9}

15) How many numbers can be formed using the digits 2, 3, 5, 6, 7 and 8 that are more than 500 but less than 5000 (repetition of digits is allowed)?

a) 648 b) 540 c) 432 d) 576

16) How many 4-digit numbers can be formed using the digits 0, 1, 2, 4, 5 and 6 that are divisible by 5 (repetition of digits is not allowed)?

a) 118 b) 120 c) 108 d) None

17) How many integers, greater than 999 but not greater than 4000, can be formed with the digits, 0, 1, 2, 3, and 4, if repetition of digits is allowed? ***[CAT]***

a) 499 b) 500 c) 375 d) 376

18) How many number plates can be formed having two letters of English alphabet and followed by a two digit number, if repetition of digits is not allowed? ***[TCS 2017]***

a) 58500 b) 14625 c) 26! x 10! d) 60840

19) A company decides a new identity code for all its employees. The identity code comprise of five letter initials that can be formed using the alphabets of English language such that the fifth letter is always a consonant. How many such combinations are possible?

a) $26^3 \times 21^2$ b) $26^4 \times 21^2$ c) $25^3 \times 5^2$ d) $26^4 \times 21^2$

20) A number lock consists of 4 rings each marked with 10 different numbers. In how many cases the locks cannot be opened? ***[SNAP 2008]***

a) 4^{10} b) 103 c) 10^4 d) 9999

Check the Answers

1	**B**	6	**D**	11	**C**	16	**C**
2	**C**	7	**C**	12	**B**	17	**D**
3	**A**	8	**C**	13	**D**	18	**D**
4	**A**	9	**A**	14	**C**	19	**B**
5	**B**	10	**C**	15	**D**	20	**D**