MATHEMATICS

DPP

DAILY PRACTICE PROBLEMS

DPP No. 75

Total Marks : 22

Max. Time : 23 min.

Topic : Permutation & Combination

Type of Questions		**M.M., Min.**
Single choice Objective (no negative marking) Q.1,2,3,4,5,6	**(3 marks, 3 min.)**	**[18, 18]**
Subjective Questions (no negative marking) Q.7	**(4 marks, 5 min.)**	**[4, 5]**

1. Number of ways in which four different toys and five indistinguishable marbles can be distributed between 3 boys, if each boy receives at least one toy and at least one marble

(A) 42 (B) 100 (C) 150 (D) 216

2. If 'm' denotes the number of 5 digit numbers when each successive digits are in their descending order of magnitude and 'n' is the corresponding figure when the digits are in their ascending order of magnitude, then (m – n) has the value

(A) 2. $^{10}C_5$ (B) $^{10}C_4$ (C) $^{9}C_3$ (D) $^{9}C_5$

3. The number of non negative integral solution of the equation, $x + y + 3z = 33$ is:

(A) 120 (B) 135 (C) 210 (D) 520

4. The total number of divisors of the number $N = 2^5 \cdot 3^4 \cdot 5^{10} \cdot 7^6$ that are of the form $4k + 2$, $K \in N$ is equal to

(A) 385 (B) 384 (C) 96 (D) 77

5. There are 9 st. lines of which 5 are concurrent at a point and other 4 are concurrent at another point and no two of these 9 lines are parallel then number points of intersection is

(A) 20 (B) 22 (C) 36 (D) 38

6. Number of natural numbers between 100 & 1000 such that at least one of their digits is 6, is

(A) 251 (B) 243 (C) 258 (D) 252

7. 5 boys & 4 girls sit in a straight line. Find the number of ways in which they can be seated if 2 girls are together & the other 2 are also together but separated from the first 2.

Answers Key

1. (D) **2.** (D) **3.** (C) **4.** (A)

5. (B) **6.** (D) **7.** 43200