MATHEMATICS

DPP

DAILY PRACTICE PROBLEMS

DPP No. 73

Total Marks : 27

Max. Time : 28 min.

Topic : Permutation & Combination

Type of Questions		**M.M., Min.**
Single choice Objective (no negative marking) Q.12,3,4,5	**(3 marks, 3 min.)**	**[15, 15]**
Subjective Questions (no negative marking) Q.6	**(4 marks, 5 min.)**	**[4, 5]**
Match the Following (no negative marking) Q.7	**(8 marks, 8 min.)**	**[8, 8]**

1. 10 IIT & 2 PET students sit in a row. If the number of ways in which exactly 3 IIT students sit between 2 PET students is K.10!, then the value of 'K' is :

(A) 16. 10! (B) 2.10! (C) 12! (D) 16

2. Number of ways in which 7 people can occupy six seats, 3 seats on each side in a first class railway compartment if two specified persons are to be always included and occupy adjacent seats on the same side, is (k). 5 ! then k has the value equal to:

(A) 2 (B) 4 (C) 8 (D) none

3. Number of different ways in which 8 different books can be distributed among 3 students, if each student receives at least 2 books is

(A) 2940 (B) 2600 (C) 2409 (D) 2446

4. If letters of the word "PARKAR" are written down in all possible manner as they are in a dictionary, then the rank of the word 'PARKAR' is

(A) 98 (B) 99 (C) 100 (D) 101

5. 5 Indian & 5 American couples meet at a party & shake hands. If no wife shakes hands with her husband & no Indian wife shakes hands with a male, then the number of hand shakes that takes place in the party is :

(A) 95 (B) 110 (C) 135 (D) 150

6. The tamer of wild animals has to bring one by one 5 lions & 4 tigers to the circus arena. The number of ways this can be done if no two tigers immediately follow each other is ..... .

7. **Match the column**

Column - I	**Column - II**
(A) Six boys and six girls sit along a line alternately in x ways and along a circle (again alternately) in y ways, then x = ky, then k =	(p) 2.48!
(B) There are 50 persons among whom 2 are brothers. The number of ways they can be arranged in a circle, if there is exactly one person between the two brothers is	(q) 12
(C) The number of ways in which 10 boys can take positions around a circular table round table, if two particular boys must not be seated side by side is :	(r) 360
(D) The number of 5 digit numbers of the form x y z y x in which x < y is :	(s) 7.8!

Answers Key

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

5. (C) **6.** 43200

7. (A) $\rightarrow$ (q), (B) $\rightarrow$ (p), (C) $\rightarrow$ (s), (D) $\rightarrow$ (r)