MATHEMATICS

DPP

DAILY PRACTICE PROBLEMS

DPP No. 74

Total Marks : 23

Max. Time : 24 min.

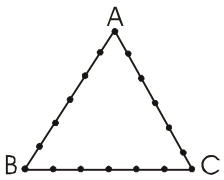
Topics : Permutation & Combination, Probability

Type of Questions		**M.M., Min.**
Single choice Objective (no negative marking) Q.1,2,3,4,5	**(3 marks, 3 min.)**	**[15, 15]**
Fill in the Blanks (no negative marking) Q.6	**(4 marks, 4 min.)**	**[4, 4]**
Subjective Questions (no negative marking) Q.7	**(4 marks, 5 min.)**	**[4, 5]**

1. 6 chocolates out of 8 different brands available in the market are choosen, what is the probability that all the chocolates are of different brands.

(A) $\frac{{}^{8}C_{6}}{{}^{13}C_{6}}$ (B) $\frac{{}^{8}C_{6}}{{}^{13}C_{8}}$ (C) $\frac{{}^{8}C_{6}}{8^{6}}$ (D) None of these

2. 18 points are indicated on the perimeter of a triangle ABC (see figure).
If three points are choosen probability it will form a triangle.



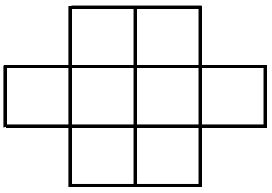
(A) $\frac{331}{816}$ (B) $\frac{1}{2}$

(C) $\frac{355}{408}$ (D) $\frac{711}{816}$

3. A five digits number of the form x y z y x is choosen, probability that x < y is :

(A) $\frac{35}{90}$ (B) $\frac{6}{15}$ (C) $\frac{19}{45}$ (D) $\frac{13}{30}$

4. Find the probability in which 5 X's can be placed in the squares of the figure so that no row remains empty is



(A) $\frac{11}{28}$ (B) $\frac{11}{14}$

(C) $\frac{9}{14}$ (D) $\frac{1}{2}$

5. The probability of choosing randomly a number which is from 1 to 90 divisible by 6 or 8 is

(A) $\frac{1}{6}$ (B) $\frac{11}{90}$ (C) $\frac{1}{30}$ (D) $\frac{23}{90}$

6. (i) The number of arrangements that can be made taking 4 letters, at a time, out of the letters of the word "PASSPORT" is _____
(ii) Probability that both S appear in such 4 letter words is _____
(iii) Probability that all letter are distinct in such 4 letter words is _____

7. A 10 digit numbers is choose with odd digits. Find the probability that no two consecutive digits are same.

Answers Key

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

5. (D) **6.** (i) 606 (ii) $\frac{21}{101}$ (iii) $\frac{{}^{6}C_{4}.4!}{606}$

7. $\left(\frac{4}{5}\right)^{9}$