DPP
DAILY PRACTICE PROBLEMS

Class : XIth **Subject : MATHS**
Date : **DPP No. :4**

Topic :-SETS

1. Two finite sets have m and n elements. The total number of subsets of the first set is 56 more than the total number of subsets of the second set. The values of m and n are
   a) $m = 7, n = 6$ b) $m = 6, n = 3$ c) $m = 5, n = 1$ d) $m = 8, n = 7$
2. Let X and Y be the sets of all positive divisors of 400 and 1000 respectively (including 1 and the number). Then, $n(X \cap Y)$ is equal to
   a) 4 b) 6 c) 8 d) 12
3. If X and Y are two sets, then $X \cap (Y \cup X)'$ equals
   a) X b) Y c) ϕ d) None of these
4. If $A = \{1, 2, 3, 4, 5, 6\}$, then how many subsets of A contain the elements 2, 3 and 5?
   a) 4 b) 8 c) 16 d) 32. For any three 6
5. for any three sets A_1, A_2, A_3, let $B_1 = A_1, B_2 = A_2 - A_1$ and $B_3 = A_3 - (A_1 \cup A_2)$, then which one of the following statement is always true
   a) $A_1 \cup A_2 \cup A_3 \supset B_1 \cup B_2 \cup B_3$
   b) $A_1 \cup A_2 \cup A_3 = B_1 \cup B_2 \cup B_3$
   c) $A_1 \cup A_2 \cup A_3 \subset B_1 \cup B_2 \cup B_3$
   d) None of these
6. In an election, two contestants A and B contested $x\%$ of the total voters voted for A and $(x + 20)\%$ for B. If 20% of the voters did not vote, then $x =$
   a) 30 b) 25 c) 40 d) 35
7. In a rehabilitation programme, a group of 50 families were assured new houses and compensation by the government. Number of families who got both is equal to the number of families who got neither of the two. The number of families who got new houses is 6 greater than the number of families who got compensation. How many families got houses?
   a) 22 b) 28 c) 23 d) 25
8. Let $\mathcal{U}$ be the universal set for sets A and B such that $n(A) = 200, n(B) = 300$ and $n(A \cap B) = 100$. Then, $n(A' \cap B')$ is equal to 300, provided that $n(\mathcal{U})$ is equal to
   a) 600 b) 700 c) 800 d) 900
9. Three sets A, B, C are such that $A = B \cap C$ and $B = C \cap A$, then
   a) $A \subset B$ b) $A \supset B$ c) $A \equiv B$ d) $A \subset B'$
10. If $a\ N = \{a\ x : x \in N\}$ and $b\ N\ \cap c\ N = d\ N$, where $b, c \in N$ are relatively prime, then
    a) $d = bc$ b) $c = bd$ c) $b = cd$ d) None of these
11. In rule method the null set is represented by
    a) $\{\}$ b) Φ c) $\{x : x \neq x\}$ d) $\{x : x = x\}$
12. Let A be a set represented by the squares of natural number and x, y are any two elements of A.Then,

a) $x - y \in A$ b) $xy \in A$ c) $x + y \in A$ d) $\frac{x}{y} \in A$