

Comprehensive Test Series-09 Sets

TIME: 45 min

MM: 25

General Instructions:

- All Questions are compulsory.
 - Marks are given alongwith the questions individually.
 - Use of calculator is not permitted.
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- Q.1 A survey shows that 73% of the Indians like apples, whereas 65% like oranges. What percentage of Indians like both apples and oranges? (4)
- Q.2 There are 260 persons with a skin disorder. If 150 had been exposed to the chemical A, 74 to the chemical B and 36 to both the chemicals A and B find the number of persons exposed to
- (i) chemical A but not chemical B; (4)
- (ii) chemical B but not chemical A;
- (iii) chemical a or chemical B.
- Q.3 A school awarded 42 medals in hockey, 18 in basketball and 23 in cricket. If these medals were bagged by a total of 65 students and only 4 students got medals in all the three sports, how many students received medals in exactly two of the three sports? (4)
- Q.4 Describe the following sets in Roster form: (3)
- (i) $\{x \in N : x^2 < 25\}$;
- (ii) $\{x : x \text{ is a two digit number such that the sum of its digits is } 7\}$
- Q.5 List all the elements of the following sets: (3)
- (i) $E = \{x : x \text{ is a month of year not having } 31 \text{ days}\}$
- (ii) $F = \{x : x \text{ is a letter of the word "MISSISSIPPI"}\}$
- Q. 6 If $I = \{1,2,3\}$. Find the subsets of A. (3)
- Q.7 Let $A = \{3, 6, 12, 15, 18, 21\}$, $B = \{4, 8, 12,16,20\}$,
Find $A - B$
- Q. 8 Let $U = \{1,2,3,4,5,6,7,8,9\}$, $A = \{2,4,6,8\}$, and $B = \{2,3,5,7\}$. (4)
Verify that $(A \cup B)' = A' \cap B'$