

Elementary Mathematics

Q. Attempt Short Notes Question :

- 1 What do you mean by the set? Explain its types with example.
- 2 What do you mean by the union & Intersection? Explain with example
- 3 What do you mean by the Symmetric Difference? Explain with example
4. What do you mean by the Cartesian Product ? Explain with example.

Q.1 If $U=\{2,4,\dots,16\}$, $A=\{2,6,8,10\}$ and $B=\{4,6,10,14\}$ then find out the following set $(U-A) \cap (U-B)$

Q.2 Prove the following

$$(A-C) \cap (B-C) = (A \cap B) - C$$

Q.3 Which of following check sets are disjoint or not

$$A=\{x, x=2n, n \in \mathbb{N}\} \text{ \& \& } B=\{x, x=2n-1, n \in \mathbb{N}\}$$

Q.4 if $A=\{1,3,5\}$ & $B=\{2,4,6\}$

Find the value of $A \times B$ & $A - B$

Q.5 In a group of 1000 people there 750 who speaks hindi and 400 ther who can speak Bengali. How many can speak Hindi only ? How may can speak Bengali only. How many can speak both Hindi and Bengali.

Q.6 if 63% of persion like oraganes where 76% like apples. Find the percentage of person who like both oranges and apples

Q.7 Prove the following

$$(A \Delta B) \Delta C = A \Delta (B \Delta C)$$

Q.8 if $U=\{1,2,3,4,5,6,7,8,9,10\}$

$$A=\{5,6,7,8\} \text{ \& \& } B=\{8,9,10\}$$

Check $(A \cup B)' = A' \cap B'$