

(c) $A \cap (B \cap C)$
 $B \cap C = \{4\}$
 $A \cap (B \cap C) = \phi$ Ans.

(d) $(A \cup B) \cap C$
 $A \cup B = \{0, 1, 2, 3, 4, 5\}$
 $(A \cup B) \cap C = \{0, 4, 5\}$ Ans.

(e) $(A \cap B) \cup (A \cap C)$
 $A \cap B = \{1\}$
 $A \cap C = \{0\}$
 $(A \cap B) \cup (A \cap C) = \{1, 0\}$ Ans.

Q.3. $A \cap B = \phi$, then A and B are called which type of set?

Ans \rightarrow Disjoint (अलग-अलग)

Q.4. If $A = \{1, 2, 3, 4\}$, $B = \{2, 4, 6, 8\}$, $C = \{3, 4, 5, 6\}$. then find the following set.

(a) $A \cap (B \cup C)$
 $B \cup C = \{2, 3, 4, 5, 6, 8\}$
 $A \cap (B \cup C) = \{2, 3, 4\}$ Ans.

(b) $A \cap (B \cap C)$

$B \cap C = \{4, 6\}$

$A \cap (B \cap C) = \{4\}$ Ans.

(c) $A \cup (B \cap C)$

$B \cap C = \{4, 6\}$

$A \cup (B \cap C) = \{1, 2, 3, 4, 6\}$ Ans.

Q.7. IF universal set $\Omega = \{1, 2, 3, 4, 5, 6, 7\}$ and $A = \{1, 3, 5, 6, 7\}$
then find A'

$\rightarrow \{2, 4\}$ Ans.

Q.8. $A = \{a, b, c, d, e, f\}$, $B = \{a, c, d\}$, and $C = \{b, c, d, e\}$

(i) $A \cap B' = \{b, e, f\}$ Ans.

(ii) $A \cap C' = \{a, f\}$ Ans.

Q.9. IF $A = \{2, 4, 6\}$, $B = \{2, 4, 6, 8\}$

$B - A = \{8\}$ Ans.

Q.10. IF $X = \{1, 2, 3, 4, \dots, 9\}$, $A = \{1, 2, 3, 7\}$, $B = \{2, 4, 6, 8\}$

then find the following with respect to X

(i) $(A \cup B)'$

$A \cup B = \{1, 2, 3, 4, 6, 8\}$

$(A \cup B)' = \{5, 7, 9\}$ Ans.

$$(ii) (A \cap B)'$$

$$A \cap B = \{2, 4\}$$

$$(A \cap B)' = \{1, 3, 5, 6, 7, 8, 9\} \text{ Ans.}$$

$$(iii) A' \cup B'$$

$$A' = \{5, 6, 7, 8, 9\}$$

$$B' = \{1, 3, 5, 7, 9\}$$

$$A' \cup B' = \{1, 3, 5, 6, 7, 8, 9\}$$

$$(iv) A' \cap B' =$$

$$A' = \{5, 6, 7, 8, 9\}$$

$$B' = \{1, 3, 5, 7, 9\}$$

$$A' \cap B' = \{5, 7, 9\} \text{ Ans.}$$

$$11. \text{ If } A = \{1, 2, 3\}, B = \{3, 4, 5\}, C = \{1, 3, 5\}$$

$$(i) A - (B \cup C)$$

$$B \cup C = \{1, 3, 4, 5\}$$

$$A - (B \cup C) = \{2\} \text{ Ans.}$$

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

$$= \{1, 2\} \cap \{2\}$$

$$= \{2\} \text{ Ans.}$$