

INTERNATIONAL INDIAN SCHOOL BURAI DAH

WORK SHEET-CLASS-11-2026-27

Ch:1 -SETS

MCQ:

1-The set $\{1,2,3\}$ is a subset of which of the following sets ?

- (a) $\{1,2,3,4\}$ (b) $\{2,4,6\}$ (c) $\{1,2,4\}$ (d) $\{1,3,5\}$

2-If $A = \{x : x \text{ is a multiple of } 3\}$ and $B = \{x : x \text{ is a multiple of } 5\}$ then what is $A \cap B$?

- (a) $\{3,5\}$ (b) $\{15,30\}$ (c) $\{0\}$ (d) $\{3,5,15,30\}$

3-Which of the following is the empty set

- (a) $\{x : x \text{ is prime number less than } 5\}$
(b) $\{x : x \text{ is even number greater than } 10\}$
(c) $\{x : x \text{ is multiple of } 7\}$
(d) $\{x : x \text{ is letter in the word "set"}\}$

4-If $A = \{1,2,3,4\}$ $B = \{3,4,5,6\}$ then what is $A \cup B$?

5-Which of the following is true for the complement of set A?

- (a) $A \cup A' = \emptyset$ (b) $A \cap A' = A$ (c) $A \cup A' = U$ (d) $A \cap A' = \emptyset$

Subjective Type Questions:

1-Which of the following are the Sets ? Justify your answer

- (a) The collection of all the months of a year beginning with letter M
(b) The Collection of difficult topics in mathematics

2-If $A =$ Set of letters of the word 'DELHI' and $B =$ the set of letters the word 'DOLI' then find.

- (a) $A \cup B$ (b) $A \cap B$ (c) $A - B$

3-Find the $A \cap (B \cup C)$ if $A = \{1,3,5,8\}$ $B = \{3,5,7\}$ $C = \{2,4,6,8\}$

4-Are Sets $A = \{1,2,3,4\}$ $B = \{x : x \in N \text{ and } 5 \leq x \leq 7\}$ are disjoint? Explain.

5-Let $A = \{\text{All prime numbers less than } 10\}$ and $B = \{\text{All odd numbers less than } 10\}$ Find $\{A - (A \cap B)\}$

6-If $A = \{1,3,5,7,9,11,13,15,17\}$ $B = \{2,4,6,8,10,12,14,16,18\}$, $U = \{1,2,3,\dots\}$ and U is a universal set then find $A' \cup \{(A \cup B) \cap B'\}$

7-Let $A = \{1,2,4,5\}$ $B = \{2,3,5,6\}$ $C = \{4,5,6,7\}$ verify the following identity

$$A \cup (B \cap C) = [(A \cup B) \cap (A \cap C)]$$

8-Using properties of Sets show that

(i) $A \cup (A \cap B) = A$

(ii) $A \cap (A \cup B) = A$

9-Using the properties of sets and their complements prove that

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

10- For any two sets A and B , Prove that $A \cup B = A \cap B \Leftrightarrow A = B$