

Ex-10 (B)

1. If Set $A = \{2, 3, 4, 5, 6\}$, state which of the following statements are true and which are false :

- i) $2 \in A$ True
- ii) $5, 6 \in A$ True
- iii) $3, 4, 7 \in A$ false
- iv) $2, 8 \in A$ false

2. If Set $B = \{4, 6, 8, 10, 12, 14\}$, state which of the following statements are correct and which are wrong:

- i) $5 \in B$ wrong $5 \notin B$
- ii) $12 \in B$ Correct
- iii) $14 \in B$ Correct
- iv) $9 \in B$ wrong $9 \notin B$
- v) B is the set of even numbers between 2 and 16. correct
- vi) 4, 6, and 10 are the numbers of the Set B . Correct

3. state whether true or false :

- i) Sets $\{4, 9, 6, 2\}$ and $\{6, 2, 4, 9\}$ are not the same. false

ii) Sets $\{0, 1, 3, 9, 4\}$ and $\{4, 0, 1, 3, 9\}$ are the same. True.

iii) Sets $\{5, 4\}$ and $\{5, 4, 4, 5\}$ are not the same. false

iv) Sets $\{8, 3\}$ and $\{3, 3, 8\}$ are the same. True

v) Collection of vowels used in the word 'ALLAHABAD' forms a set. True

vi) If P is the set of letters in the word 'ROOP'; then $P = \{P, O, R\}$. True

vii) If M is the set of letters used in the word 'MUMBAI'; then $M = \{m, u, b, a, i\}$. True

4. Write the set containing:

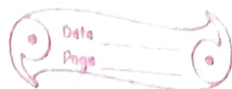
i) the first five counting numbers — $\{1, 2, 3, 4, 5\}$

ii) the three types of angles — $\{\text{acute, obtuse, right angle}\}$

iii) the three types of triangles — $\{\text{scalene, isosceles, equilateral triangle}\}$

iv) the members of your family — $\{\text{Subasish, Subhalaxmi, Sonakshi}\}$

v) the first six consonants of the English alphabet — $\{b, c, d, f, g, h\}$



4. Write each of the following sets in Roster (tabular) form and also in Set Builder form.

i) Set of all natural numbers that can divide 24 completely.
Roster form - $\{1, 2, 3, 4, 6, 8, 12, 24\}$

Set builder form - $\{x: x \text{ is a natural no. which divides } 24 \text{ completely}\}$

ii) Set of odd numbers between 20 and 35.

Roster form - $\{21, 23, 25, 27, 29, 31, 33\}$

Set builder form - $\{x: x \text{ is an odd no. between } 20 \text{ and } 35\}$

iii) Set of letters used in the word 'CALCUTTA'.

Roster form - $\{c, a, l, u, t\}$

Set builder form - $\{x: x \text{ letters used in the word } \text{CALCUTTA}\}$

iv) Set of names of the first five months of a year.

Roster - $\{\text{Jan.}, \text{Feb.}, \text{Mar.}, \text{Apr.}, \text{May}\}$

Set builder - $\{x: x \text{ first five months of a year}\}$

v) Set of all two-digit numbers that are perfect square as well.

Roster - $\{16, 25, 36, 49, 64, 81\}$

Set builder - $\{x: x \text{ perfect square two digit number}\}$

5. Write in Roster form -

i) the first four odd natural no. each divisible by 5 -

$\{5, 15, 25, 35\}$

ii) the counting nos. between 15 and 35, each of which is divisible by 6. - $\{18, 24, 30\}$

iii) the names of the last three days of a week - $\{\text{Friday}, \text{Saturday}, \text{Sunday}\}$

iv) ~~the~~ the names of the last four months of a year - $\{\text{Sept.}, \text{Oct.}, \text{Nov.}, \text{Dec.}\}$