

EXERCISE - 10 (B)

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

- (i)  $2 \in A = \text{True}$
- (ii)  $5, 6 \in A = \text{True}$
- (iii)  $3, 4, 7 \in A = \text{False}$
- (iv)  $2, 8 \in A = \text{False}$

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

- (i)  $5 \in B = \text{This statement is wrong.}$
- (ii)  $12 \in B = \text{This ~~is~~ statement is ~~wrong~~ correct.}$
- (iii)  $14 \in B = \text{This statement is correct.}$
- (iv)  $9 \in B = \text{This statement is wrong.}$
- (v)  $B$  is the set of even numbers between 2 and 16. This statement is correct.
- (vi) 4, 6 and 10 are the members of the set  $B$ . This statement is correct.

The wrong statements to be corrected.

- (i)  $5 \in B = \{4, 6, 8, 10, 12 \text{ and } 14 \in B$
- (iv)  $9 \in B = \{4, 6, 8, 10, 12 \text{ and } 14 \in B$

3. State whether True or False.

- (i) Sets  $\{4, 9, 6, 2, 2\}$  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" form a set. **True.**  
→  $\{A\}$  is the set of collection of vowels used in the word ~~Allah~~ "ALLAHABAD".
- (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: (only answers)

- (i)  $\{1, 2, 3, 4, 5\}$  is the set of the first five counting nose.
- (ii)  $\{\text{acute angle, obtuse angle, right angle}\}$  is the set of the three types of angles.
- (iii)  $\{\text{acute-angled triangle, obtuse-angled triangle, right-angled triangle}\}$  is a set of three types of triangle.
- (iv)  $\{\text{Shaktidutta Sarangi, Bobita Sarangi, Bobita Mishra, Anam Sarangi, Diksha Priyadarshini}\}$  is set of members of our family.
- (v)  $\{B, C, D, F, G, H\}$  is a set of the first six consonants of the English alphabet.
- (vi)  $\{A, I, E, O\}$  is a set of the first four consonants of the vowels of the English alphabet.
- (vii)  $\{\text{Jawaharlal Nehru, Atal Bihari Vajpay, Morarji Desai}\}$  is a set of the only three Indian Prime Ministers.

5. (a) Write the members (elements) of each set given below.

(i)  $\{3, 8, 5, 15, 12, 7\} = 7, 12, 15, 5, 8, 3.$

(ii)  $\{c, m, n, o, s\} = c, m, s, o$

(b) Write the sets whose elements are:

(i) ~~2, 4, 8, 16, 64, 128~~  $= \{2, 4, 8, 16, 128, 64\}$

(ii)  $3, 5, 15, 45, 75$  and  $90 = \{3, 5, 15, 45, 75, 90\}$

6.

Only answers

(i)  $\{b, h, o, p, a, l\}$

(ii)  $\{E, A\}$

(iii)  $\{h, g, k, n\}$