

EXERCISE - 10(B)



1) Set  $A = \{2, 3, 4, 5, 6\}$

- (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) Set  $B = \{4, 6, 8, 10, 12, 14\}$

- (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 members of the set  $B$  - correct,

3/ (i) sets  $\{4, 9, 16, 25\}$  and  $\{6, 2, 4, 9\}$  are not the same.  
ans - False

(ii) sets  $\{0, 1, 3, 9, 4\}$  and  $\{4, 0, 1, 3, 9\}$  are the same.  
ans - True

(iii) sets  $\{5, 4\}$  and  $\{5, 4, 5\}$  are not the same.  
ans - False

(iv) sets  $\{8, 3\}$  and  $\{3, 3, 8\}$  are the same.  
ans - True

(v) collection of vowels used in the word 'ALLAHABAD' forms a set.  
ans - True

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

ans - True

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

ans - True



4/ii) set = the first five counting numbers

ans -  $\{1, 2, 3, 4, 5\}$

(i) the three types of angles

ans -  $\{\text{acute-angle, right-angle, obtuse-angle}\}$

(ii) the three types of ~~any~~ triangles

ans -  $\{\text{scalene-triangle, isosceles-triangle, equilateral-triangle}\}$

(iv) the members of your family.

ans -  $\{\text{Jagannath, Sujata, Jagadish, Subhashree}\}$

(v) the first six consonants of English alphabet.

ans -  $\{b, c, d, f, g, h\}$

(vi) the first four vowels of the English alphabet.

ans -  $\{a, e, i, o\}$

(vii) the names of any three prime Ministers of India.

ans -  $\{\text{Indira Gandhi, Atal Bihari Vajpayee, Dr. Manmohan Singh}\}$

5. (a) (i) The members (elements) of set  $\{3, 8, 5, 15, 12, 7\}$   
 $= \{3, 8, 5, 15, 12 \text{ and } 7\}$

(ii) The members of set  $\{C, m, 2, 0, S\} =$   
 $= \{C, m, 2, 0 \text{ and } S\}$

(b) (i) the set whose elements are  $= 2, 4, 8, 16, 64$  and  $128$   
 $= \{2, 4, 8, 16, 64, 128\}$

(ii) The set whose elements are  $= 3, 5, 15, 45, 75$  and  $90$   
 $= \{3, 5, 15, 45, 75, 90\}$

(6) (i) The set of letters used in the word, 'BHOPAL'  
 $= \{b, h, o, p, a, l\}$

(ii) The set of vowels used in the word, 'BENGAL' =  $\{e, a\}$

(iii) The set of consonants used in the word 'HONG-KONG' =  $\{h, n, g, k\}$

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