

## EX-10 D

i) Given sets  
 $\{ \text{Natural nos less than five} \}$ , and  
 $\{ \text{Letters of the word 'BOAT'} \}$   
Here, both the sets have same no. of elements.  
Hence, the given set of pair is equivalent.

ii)  $\{ 2, 4, 6, 8, 10 \}$  is the Roster form for the even natural no.s less than 12.  
Hence, the given set of pair is equal.

iii)  $\{ 1, 3, 5, 7 \}$  is the Roster form for the set of odd natural no.s.

Hence, the given set of pair is equal.

iv) Given sets  
 $\{ \text{Letters of the word 'MEMBER'} \}$  and  
 $\{ \text{Letters of the word 'REMEMBER'} \}$   
Here, the letters of both the sets are same.  
Hence, the given set of pair is equal.

v) We know, there is no negative natural no.s and there is no month which has 50 day.  
Thus, which has 50 day.  
Thus, both sets of pair is equal.

Q7) i) Given set

$\{2, 4, 6, 8, \dots, 900\}$

Here, the given set has finite no. of elements

Hence, the set is finite

ii) Given set

$\{\dots, -5, -4, -3, -2\}$

Here, the given set has infinite no. of elements

Hence, the set is infinite.

iii) Given set

$\{x: x \text{ is an integer between } -60 \text{ and } 60\}$

Here, the given set has finite no. of elements

Hence, the set is finite

iv) Given set

$\{ \text{No. of electrical appliances in house are finite working in your house} \}$

Here, the no. of electrical appliances in house are finite

Hence, the set is finite

v) Given set

$\{x: x \text{ is a whole no. greater than } 20\}$

Here, the no. of whole no. greater than 20 is infinite

Hence, the set is infinite

Q9) i)  $E = \{-8, -4, 0, 4, 8\}$  is on finite set  
Hence, the given statement is false.

ii)  $E = \{-32, -28, -24, -20, \dots, 0, 4, 8, 16\}$  is a finite set  
~~Hence~~ Hence, the given statement is false

~~iii)  $E = \{-32, -28, -24, -20, \dots, 0, 4, 8, 16\}$  is finite set  
Hence, the given statement is false~~

~~iii)  $E = \{x : x \text{ is a natural no. less than } 13\}$  is an empty set  
Hence, the given statement is true~~

iv) Both the sets are empty sets and we know that all empty sets are equal  
Hence, the given statement is true

v) We know that, there is no odd no. that is divisible by 2  
Thus, the given set is empty set  
Hence, the given statement is true.

(9) i) No girl can be of age below 15 years and also above 15 years. Hence, the given sets are ~~disjoint~~ disjoint.

ii) There are possibilities when the boys have age greater than 20 years and also above 27 years. Hence, the given sets are 'overlapping'.

iii) There are common natural nos. that lies between 35 and 60 also lies between 50 and 80. Hence the given sets are overlapping.

iv) There are possibilities that students of class IX studying in I.C.S.E. board are common. Hence, the given sets are overlapping.

v) Since, 24, is the common natural no. in both the given sets. Hence, the given sets are overlapping.