EQUAL SETS:

Two sets are said to be equal if the elements of the two sets are the same.

EX: A = {1, 2, 3, 4}

B = {1, 2, 3, 4} SET A = SET B

EQUIVALENT SETS:

Two sets are said to be equivalent if the elements in both the set are equal.

EX: A = {1, 5, 7}

B = {A, B, C}

EXERCISE 10(D)

1. (i) {3, 5, 7, ...} Infinite

(ii) {1, 2, 3, 4} Finite

(iii) {...., -3, -2, -1, 0, 1, 2} Infinite

(iv) {20, 30, 40, 50, ... 20} Finite

2. (i) Set of counting numbers between 5 and 6. yes

(ii) Set of odd nos. between 7 and 19. No

(iii) Set of odd nos. between 7 and 9. yes

(iv) Set of even no. that are not divisible by 2. yes

(v) {0}. yes No

3. (i) $\{3,5,7\}$ & $\{5,3,7\}$ Equal & Equivalent both

(ii) $\{8,6,10,2\}$ & $\{3,2,4,6\}$ Equivalent but not equal

(iii) $\{7,7,2,12\}$ and $\{1,2,7\}$ Equal but not equivalent

(iv) $\{2,4,6,8,10\}$ and $\{a,b,d,c,m\}$ Equivalent but not equal

4. (i) Set of integers = infinite

(ii) {Multiples of 5} = infinite

(iii) {Fractions between 1 and 2} = infinite

(iv) {No. of people in India} = finite

(v) {Set of trees in the world} = infinite

(vi) Set of leaves on a tree = finite

(vii) Set of children in all the schools of Delhi = finite

(viii) $\{\ldots, -4, -2, 0, 2, 4, 6, 8\}$ = infinite

(ix) $\{-12, -9, -6, -3, 0, 3, 6, \ldots\}$ = infinite

(x) {No. of points in a line segment 4cm long} = infinite

5. (i) {Prime nos. divisible by 2} = No

(ii) {Negative natural nos.} = Yes

(iii) {Women with height 5 metre} = No

(iv) {Integers less than 5} = No

(v) Prime numbers between 17 and 23} = No

(vi) Set of even not ~~less than~~ divisible by 2 = Yes

(vii) Set of multiples of 3 that are more than 9 & less than 15. = No

6. (i) {Natural no. less than five} & {letters of the word 'BOAT'} = Equivalent

(ii) {2, 4, 6, 8, 10} & {even ~~no~~ natural no. less than 12}. = Equal & Equivalent

(iii) {1, 3, 9, 7, ..} and set of odd natural nos. = Equal and equivalent

(iv) {letters of the word 'MEMBER'} and {letters of the word 'REMEBER'} = equal and equivalent

(v) {Negetive natural no.} & {30th day of a month} = Equal

(vi) {Even natural no.} & {Odd natural no.} = equivalent