H.W
30/9/21

Ch-10

Sets

Ex- 10(D)

1. State whether the given set is infinite or finite:

(i) {3, 5, 7, ...}
Ans- Infinite

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

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

(iv) {20, 30, 40, 50, ..., 200}
Ans- Finite

2. Which of the following sets is empty?

(i) Set of counting numbers between 5 and 6.
Ans- Empty

(ii) Set of odd numbers between 7 and 19.
Ans- Not Empty

(iii) Set of odd numbers between 7 and 8.
Ans- Empty

(iv) Set of even numbers that are not divisible by 2.
Ans- Empty

(v) {0}
Ans- Not Empty

3. State which pair of sets given below are equal sets and which are equivalent

(i) {3, 5, 7} and {5, 3, 7}

Ans- Equal

(ii) {8, 6, 10, 12} and {3, 2, 4, 6}

Ans- Equivalent

(iii) {7, 7, 2, 12} and {1, 2, 7}

Ans- Equal

(iv) {2, 4, 6, 8, 10} and {a, b, d, e, m}

Ans- Equivalent

4. State which of the following are **finite** sets and which are **infinite**:

(i) Set of integers: Infinite

(ii) {Multiples of 5}: Infinite

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

(iv) {Number 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 = Infinite

(viii) {..., −4, −2, 0, 2, 4, 6, 8} = Infinite

(ix) {−12, −9, −6, −3, 0, 3, 6, ...} = Infinite

(x) {Number points in a line segment 4cm long}. = Infinite

Ex-1.0(E)

2. Given: A = { Natural numbers less than 10 }
B = { Letters of the word 'PUPPET' }.
C = { Squares of the first four whole numbers }
D = { Odd numbers divisible by 2 }

Find

(i) n(A)

Ans: n(A) = 9

(ii) n(B)

= {p, u, e, t} =

= n(A) = 4

(iii) n(C)

= {2^2, 3^2, 4^2, 5^2} = {2×2, 3×3, 4×4, 5×5}

= {2, 3, 4, 5}

= n(C) = 4

(iv) n(D)

= n(D) = 0

3. State **true** or **false** for each of the following. Correct the wrong statement.

(i) If A = {0}, then n(A) = 0. false

(ii) n(∅) = 1 = false

(iii) If T = {a, 1, a, h, d, h}; then n(T) = 5 = True

(iv) If B = {1, 5, 51, 15, 5, 1}, then n(B) = 6 = false