19.7.21

EX – 10(D)

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

(i) $\{3, 5, 7, \ldots\}$ – Infinite
(ii) $\{1, 2, 3, 4\}$ – finite
(iii) $\{\ldots -3, -2, -1, 0, 1, 2\}$ – Infinite
(iv) $\{20, 30, 40, 50, \ldots 200\}$ – finite.

2. Which of the following sets is empty?

i) Set of Counting numbers between 5 an 6. empty
ii) Set of odd numbers between 7 and 19. Not empty.
iii) Set of odd numbers between 7 and 9. Empty
iv) Set of even numbers that are not divisible by 2. empty
v) $\{0\}$ not empty.

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

i) $\{3, 5, 7\}$ and $\{5, 3, 7\}$ – Equal
ii) $\{8, 6, 10, 12\}$ and $\{3, 2, 4, 6\}$ – Equivalent
iii) $\{7, 7, 2, 1, 2\}$ and $\{1, 2, 7\}$ – Equal
iv) $\{2, 4, 6, 8, 10\}$ and $\{a, b, d, e, m\}$ – Equivalent.

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

(i) Sets 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 — finite

viii) $\{\ldots, -4, -2, 0, 2, 4, 6, 8\}$ — Infinite.

ix) $\{-12, -9, -6, -3, 0, 3, 6, \ldots\}$ — Infinite.

x) {Number of points in a line segment 4 cm long} — Infinite.

5. State whether or not the following sets are empty

i) {Prime numbers divisible by 2} — Not empty.

ii) {Negative natural numbers} — Empty.

iii) {Women with height 5 metre} — Empty.

iv) {Integers less than 5} — Not Empty.

v) {Prime numbers between 17 and 23} — Not empty.

vi) Set of even numbers not divisible by 2 — Empty.

vii) Set of multiples of 3 that are more than 9 and less than 15. — Not empty.