EXERCISE 10(C)

Question 1.
Write each of the following sets in the Roster Form :
(i) The set of five numbers each of which is divisible by 3.
(ii) The set of integers between – 4 and 4.
(iii) {x: x is a letter in the word ' SCHOOL'}
(iv) {x: x is an odd natural number between 10 and 20}
(v) {Vowels used in the word 'AMERICA'}
(vi) {Consonants used in the * word 'MADRAS'}

Solution:

(i) {3, 6, 9, 12, 15}
(ii) {-3, -2, -1, 0, 1, 2, 3}
(iii) {s, c, h, o, 1}
(iv) {11, 13, 15, 17, 19}
(v) (a, e, i)
(vi) {m, d, r, s}

Question 2.
Write each given set in the Roster Form :
(i) All prime numbers between one and twenty.
(ii) The squares of first four natural numbers.
(iii) Even numbers between 1 and 9.
(iv) First eight letters of the English alphabet.
(v) The letters of the word 'BASKET'.
(vi) Four cities of India whose names start with the letter J.
(vii) Any four closed geometrical figures.
(viii) Vowels used in the word 'MONDAY'.
(ix) Single digit numbers that are perfect squares as well.

Solution:

(i) {2, 3, 5, 7, 11, 13, 17, 19}
(ii) {12, 22, 32, 42} = {1, 4, 9, 16}
(iii) {2, 4, 6, 8}
(iv) {a, b, c, d, e, f, g, h}
(v) {b, a, s, k, e, t}
(vi) {Jaipur, Jodhpur, Jalandhar, Jaunpur}
(vii) {Δ, O, □, O}
(viii) {o, a}
(ix) {0, 1, 4, 9}

Question 3.
Write each given set in the Set- Builder Form :
(i) {2, 4, 6, 8, 10}
(ii) {2, 3, 5, 7, 11}
(iii) {January, June, July}
(iv) {a, e, i, o, u}
(v) {Tuesday, Thursday}
(vi) {1,4,9, 16, 25}
(vii) {5,10,15,20,25,30}
Solution:
(i) {x : x is an even natural number less than 12}
(ii) {x : x is a prime number less than 12}
(iii) {x : x is a months of the year whose name starts with letter J}
(iv) {x : x is a vowel in English alphabets}
(v) {x : x is a day of the week whose name starts with letter T}
(vi) {x: x is a perfect square natural number upto 25}
(vii) {x : x is a natural number upto 30 and divisible by 5}.

Question 4.
Write each of the following sets in Roster (tabular) Form and also in Set-Builder Form.
(i) Set of all natural numbers that can divide 24 completely.
(ii) Set of odd numbers between 20 and 35.
(iii) Set of letters used in the word 'CALCUTTA'.
(iv) Set of names of the first five months of a year.
(v) Set of all two digit numbers that are perfect square as well.
Solution:
(i) {1,-2, 3, 4, 6, 8, 12, 24}; {x : x is a natural number which divides 24 completely}
(ii) {21, 23, 25, 27, 29, 31, 33}; {x:x is an odd number between 20 and 35}
(iii) {c, a, 1, u, t}; {x: x is a letter used in the word 'CALCUTTA'}
(iv) {January, February, March,April, May}; {x : x is name of first five months of a year}
(v) {16, 25, 36, 49, 64, 81}; {x : x is a perfect square two digit number}.

Question 5.
Write, in Roster Form, the set of :
(i) the first four odd natural numbers each divisible by 5.
(ii) th counting numbers between 15 and 35; each of which is divisible by 6.
(iii) the names of the last three days of a week.
(iv) the names of the last four months of a year.
Solution:
(i) {5, 15, 25, 35}
(ii) {18, 24, 30}
(iii) {Friday, Saturday, Sunday}
(iv) {September, October, November, December}.