SETS

SETS & THEIR REPRESENTATION

EXERCISE

Q.1 Which of the following set is not possible?

(a) Honest persons

(b) Prime numbers up to 100

(c) Even numbers up to 100

(d) Letters forming the word SCHOOL

Q.2 Which of the following is not a set of letters of word PRINCIPAL?

(a) {P,R,I,N,C,A,L}   (b) {C,A,P,I,N,R,L}

(c) {P,R,I,N,C,I,P,A,L}   (d) {L,N,I,P,C,A,R}

Q.3 Write solution set of equation $x^2-3x+2=0$ in roster form.

(a) {1,3}   (b) {2,4}

(c) {1,4}   (d) {1,2}

Q.4 Write the set $\dfrac{1}{2},\dfrac{2}{3},\dfrac{3}{4},\dfrac{4}{5},\dfrac{5}{6}$ in set builder form.

(a) {x: x=$\dfrac{n}{n+1}$ where n is a natural number less than 6}

(b) {x: x=$\dfrac{n+1}{n+2}$ where n is a natural number less than 6}

(c) {x: x=$\dfrac{n+1}{n}$ where n is a natural number less than 6}

(d) {x: x=$\dfrac{n}{n+1}$ where n is a natural number less than 5}

Q.5   Write the set $\{x : x$ is an integer and $x^2-9=0\}$ in roster form.

(a) $\{3\}$ (b) $\{-3\}$

(c) $\{3,-3\}$ (d) $\{9,3\}$

Q.6   Write the set $\{x : x$ is a natural number and $x^2-9=0\}$ in roster form.

(a) $\{3\}$ (b) $\{-3\}$

(c) $\{3,-3\}$ (d) $\{9,3\}$

Q.7   Let $A=\{1,2,3,4,5\}$. Insert appropriate symbol in 2 _____ A.

(a) $=$ (b) $<$

(c) $\in$ (d) $\notin$

Q.8   Let $X=\{1,2,3,4,5,6\}$. Insert appropriate symbol in 9 _____ X.

(a) $=$ (b) $<$

(c) $\in$ (d) $\notin$

Q.9   Which of the following does not belong to set $\{x : x$ is a vowel in English alphabet$\}$?

(a) e   (b) b

(c) I   (d) o

Q.10   The number of elements in set $\{x : x$ is a letter of word TRIGONOMETRY$\}$ is _____

(a) 8   (b) 7

(c) 9   (d) 10

Q.11   What is the solution set of the equation $X^2+3X+2=0$ in roster form?

(a) $\{-1, 2\}$ (b) $\{-1, -2\}$

(c) $\{1, -2\}$ (d) $\{1, 2\}$

Q.12   Which one of the following is the correct representation for the set $\{x: x$ is a positive integer and $x^3<50\}$ in roster form?

(a) $\{0,1,2,3,4,5\}$ (b) $\{-1,1,2,3\}$

(c) $\{1,2,3\}$ (d) $\{0,1,2,3\}$

Q.13   Which one of the following is the correct representation of set $A = \{1,3,5,7....\}$ in set builder form?

    (a) $\{x: x = 2n$ where $n \in N\}$

    (b) $\{x: x = n^2-1$ where $n \in N\}$

    (c) $\{x: x = 2n+1$ where $n \in N\}$

    (d) $\{x: x = 2n-1$ where $n \in N\}$

Q.14   Which of the following is true for set $A = \{1,2,3,5,7,10\}$?

    (a) $0 \in A$ (b) $2 \in A$

    (c) $3 \notin A$ (d) $5 \notin A$

Q.15   Which one of the following is not a set?

    (a) The collection of all whole numbers less than 200

    (b) The collection of all boys in your class

    (c) The collection of talented actors in Hollywood

    (d) The collection of all books written by Chetan Bhagat

ANSWER KEY

1.   (a)

2.   (c)

3.   (d)

4.   (a)

5.   (c)

6.   (a)

7.   (c)

8.   (d)

9.   (b)

10.   (c)

11.   (b)

12.   (c)

13.   (d)

14.   (b)

15.   (c)