

### Exercise - 10(E)

1) i)  $A = \{0, 1, 2, 3\}$

$\therefore$  Cardinal number of Set  $A = 4$ , i.e.  $n(A) = 4$

ii)  $B = \{-3, -1, 1, 3, 5, 7\}$

$\therefore$  Cardinal number of Set  $B = 6$ , i.e.  $n(B) = 6$

iii)  $C = \{\}$

$\therefore$  Cardinal number of set  $C = 0$ , i.e.  $n(C) = 0$

(iv) cardinal number of set  $D = 3$ , i.e.  $n(D) = 3$

v)  $E = \{\text{Natural numbers between 15 and 20}\}$

vi)  $F = \{\text{whole numbers from 8 to 14}\}$

$\therefore$  Cardinal number of set  $F = 7$ , i.e.  $n(F) = 7$

2) i) Given  $A = \{\text{Natural numbers less than } 10\}$   
 $= \{1, 2, 3, 4, 5, 6, 7, 8, 9\}$

$\therefore n(A) = 9$

ii) Given  $B = \{\text{Letters of the word 'puppy'}\}$   
 $= \{P, U, P, Y, T\}$   
 $\therefore n(B) = 4$

iii) Given  $C = \{\text{Squares of the first four whole numbers}\}$   
 $= \{0, 1, 4, 9\}$

$\therefore n(C) = 4$

iv) Given  $D = \{\text{Odd numbers divisible by } 2\}$   
 $= \{\}$   
 $\therefore n(D) = 0$

3) i) If  $A = \{0\}$ , then  $n(A) = 0$  (false)

ii)  $n(\emptyset) = 1$  (False)

iii) If  $T = \{a, a, h, b, d, h\}$  then  $n(T) = 5$   
(True)

iv) If  $B = \{1, 5, 5, 1, 5, 1\}$  then  $n(B) = 6$  (False).

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