

## Exercise 6-C

1. i)  $A = \{5, 7\}$

Ans) Subset of A:

$$\emptyset, \{5\}, \{7\}, \{5, 7\}$$

ii)  $B = \{a, b, c\}$

Ans) Subset of B:

$$\emptyset, \{a\}, \{b\}, \{c\}, \{a, b\}, \{b, c\}, \{a, c\},$$

iii)  $C = \{x : x \in \mathbb{N}, x \leq 2\}$

$$\{a, b, c\}$$

Ans) Subset of C:

$$\emptyset, \{0\}, \{1\}, \{2\}, \{0, 1\}, \\ \{0, 2\}, \{1, 2\}, \{0, 1, 2\}$$

i)  $\{b : b \text{ is a letter in the word 'power'}\}$

Ans) subset of  $b$ :

- $\phi, \{b\}, \{o\}, \{r\}, \{b, o\},$
- $\{b, r\}, \{o, r\}, \{b, o, r\}$

2. i) Ans) ~~C~~  $C = \{c, o, l, e, r\}$

ii) Ans)  $n(C) = 5$

iii) Ans) Number of subsets of  $C = 2^n = 2^5 = 32$

iv) Ans) Number of proper subsets of  $C = 2^n - 1 = 32 - 1 = 31$

3)  $T = \{x : x \text{ is a letter in the word 'TEETH'}\}$

Ans)  $T = \{T, E, H\}$

subset of  $T$ :

- $\phi, \{T\}, \{E\}, \{H\}, \{T, E\},$
- $\{T, H\}, \{E, H\}, \{T, E, H\}$