

Answers

Practice Assignment –I ANSWERS

- (i) Not a set ; (ii) Set ; (iii) Set ; (iv) Not a set ; (v) Set ; (vi) Set ;
(vii) Not a set ; (viii) Set
- (i) Null set (ii) Null set (iii) Not a null set
- (b) (i) Finite ; (ii) Finite ; (iii) Infinite ; (iv) Infinite ; (v) Finite ; (vi) Infinite.
- (i) 2 belong to A ; (ii) 3 does not belong to B ;
(iii) A is a subset of B ; (iv) A is proper subset of B ;
(v) A is not a proper subset of B.
- (i) Correct ; (ii) Correct ; (iii) Not correct ; (iv) Not correct ; (v) correct ;
(vi) Not correct ; (vii) Not correct.
- (a) (i) {a, e, i, o, u} ; (ii) {3, 5, 7, 9} ; (iii) {5, 10, 15, 20} ;
(iv) $\left\{-\frac{5}{2}, \frac{2}{3}\right\}$; (v) {, -3, -2, -1, 0, 1, 2, 3,}
(b) (i) {x : x is a positive integer} ; (ii) {x : x is an even positive integer} ;
(iii) {x : x is a Vowel} ; (iv) {x : x is a positive integer ≤ 100 } ;
(v) {n : x is an odd positive integer between 1 and 23}
- (i) and (iv) are null sets.
- (i) $A = \{\pm 3, \pm 4, \pm 5\}$, (ii) $B = \left\{2\frac{1}{2}, 3\frac{1}{2}, 5, 3\frac{1}{3}, 7\right\}$
(iii) $C = \{S, U, C, E\}$; (iv) $D = \left\{\frac{2}{3}, \frac{3}{5}, \frac{4}{7}, \frac{5}{9}, \frac{6}{11}\right\}$
- (i) $\phi, \{1\}, \{2\}, \{3\}, \{1, 2\}, \{2, 3\}, \{1, 3\}, \{1, 2, 3\}, \{1\} ; \{2\}, \{3\}, \{1, 2\}, \{2, 3\}, \{1, 3\} ;$
(ii) $\{\phi, \{a\}, \{b\}, \{c\}, \{a, b\}, \{b, c\}, \{a, c\}, \{a, b, c\}\}$
- $N \subset Z \subset R ; R \supset Z \supset N.$
- (i) $\left\{x : x = \frac{n}{3n+1}, n \in N \text{ and } n \leq 5\right\}$; (ii) $\left\{x = \frac{n}{n^2+1}, n \in N, 2 \leq n \leq 6\right\}$
- $A = C.$
- $A = D, B = C \text{ and } A \neq B, C; D \neq B, C$
- (i) $\phi, \{2\}$; no proper subset ;
(ii) $\phi, \{3\}, \{4\} ; \{3, 4\}$ Proper subsets ; $\{3\}, \{4\}$;
(iii) $\phi, \{2\}, \{3\}, \{4\}, \{2, 3\}, \{2, 4\}, \{3, 4\}, \{2, 3, 4\}$; Proper subsets : $\{2\}, \{3\}, \{4\}, \{2, 3\}, \{2, 4\}, \{3, 4\}$

Practice Assignment –II ANSWERS

- (i) $\{2, 5\}$; (ii) $\{2, 10, 11\}$; (iii) $\{2, 7, 10, 11\}.$
- $\{3, 5, 6, 7\}$

3. (i) $\{7, 9\}$; (ii) $\{8, 14, 17\}$; (iii) $\{7, 8, 9, 14, 17\}$; (iv) $\{8, 14, 17\}$, (v) $\{7, 8, 9, 14, 17\}$
5. $\{1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 15, 18, 21, 24, 27, 30\}$; $\{6, 9\}$;
 $\{1, 2, 3, 4, 5, 7, 8, 10\}$; $\{12, 15, 18, 21, 24, 27, 30\}$
7. 3
8. $\{3\}$; $\{1, 2, 3, 5, 6\}$
10. (a) (i) $\{1, 3, 6, 8\}$ (ii) $\{1, 3, 5, 6, 7, 8\}$ (iii) $\{1, 3, 5, 6, 7, 8\}$