EduSahara™ Assignment

Name : Set Concepts

Chapter : Sets

Grade : SSC Grade X



1. Which of the following is a singleton set?

   (i) {-2,-7,-8,9} (ii) {4,-3,1,6,-5} (iii) {-2} (iv) {-5,4,-6} (v) {1,-2}

2. Which of the following is a null set?

   (i) {-1,7,8} (ii) {6,9,2,-7,-5} (iii) {2,-9} (iv) {7,-9,-6,6} (v) {}

3. Which of the following is equal to set A = {6,4,3}?

   (i) {4,3,0} (ii) {-3,9} (iii) {8,-4,-2,4} (iv) {4,6,3} (v) {0,2,-3}

4. Which of the following is equivalent set of A = {-8,4,-9,-6,-5}?

   (i) {-8,4,-6,-5} (ii) {3,1,8,7,9,-9} (iii) {-5,-4,-8} (iv) {3,1,8,7,9} (v) {-8,-6,-3,8,-1,4,-4}

5. Which of the following is an infinite set?

   (i) {3,7,4} (ii) {0,1,2,3,4,...} (iii) {-7,7} (iv) {} (v) {8}

6. If A = {6,3,4,7,10}, which of the following are true?

   a) $A \supset 6$
   b) $6 \subset A$
   c) $6 \notin A$
   d) $6 \in A$
   e) $\{3,6\} \subset A$

   (i) {a,d} (ii) {c,a,d} (iii) {d,e} (iv) {b,e} (v) {b,e,d}

7. If A and B are disjoint sets, which of the following are true?

   a) $A \cup B = A$
   b) $B \subset A$
   c) $A \cap B = A$
   d) $A \cap B = \varnothing$
   e) $A \subset B$

   (i) {c,e,d} (ii) {a,d} (iii) {d} (iv) {b,d}

8. If A = {r,m,s,v,i}, which of the following are true?

   a) $s \subset A$
   b) $\{r,i\} \subset A$
   c) $A \supset s$
   d) $s \notin A$
   e) $s \in A$

   (i) {d,a,b} (ii) {b,e} (iii) {a,b} (iv) {c,e} (v) {c,e,b}

9. Given sets A, B and C, where $A \subset B \subset C$, which of the following are true?

a) $C \supset B$
b) $\emptyset \subset B$
c) $C \subset A$
d) $B \subset A$
e) $B \supset A$

(i) {c,d,e} (ii) {d,b} (iii) {c,a,b} (iv) {a,b,e} (v) {c,a}

10. Which of the following are true?

a) $A \cup A = \emptyset$
b) $A \cup \emptyset = A$
c) $A \cap \emptyset = A$
d) $A \cup \emptyset = \emptyset$
e) $A \cup A = A$

(i) {b,e} (ii) {c,e,b} (iii) {c,e} (iv) {a,b} (v) {d,a,b}

11. If $A \subset B$, then which of the following are true?

a) $A' \subset B$
b) $B \supset A$
c) $A = B$
d) $B \subset A$
e) $A' = B$

(i) {c,b} (ii) {b} (iii) {a,b} (iv) {d,e,b}

12. If $A \subset B$, then which of the following are true?

a) $A \cup B = A$
b) $A \cup B = \emptyset$
c) $A \cap B = A$
d) $A \cup B = B$
e) $A \cap B = B$

(i) {e,a,c} (ii) {c,d} (iii) {b,d} (iv) {b,d,c} (v) {a,c}

13. If $A \subset B$, then which of the following are true?

a) $A - B = \emptyset$
b) $B - A = A$
c) $A \cup B = \emptyset$
d) $A - B = B$
e) $B - A = B$

(i) {a} (ii) {d,e,a} (iii) {b,a} (iv) {c,a}

14. Given 5 sets $A = \{4,5,2,9\}$, $B = \{9,4,2,5\}$, $C = \{5,3,8,9,10,6,1\}$, $D = \{13,19,11,12,15,17,14\}$ and $E = \{9,10,4,7,2,8,5,6,3,1\}$, which of the following are true?

a) A = B
b) C = D
c) C ↔ D
d) A ⊂ C
e) A ↔ C

(i) {a,c} (ii) {d,c,a} (iii) {d,c} (iv) {e,b,a} (v) {b,a}

15. Which of the following are disjoint sets?

(i) $\{12,20,1\}, \{19,15,10\}$ (ii) $\{12,20,17,18,1,3\}, \{\}$ (iii) $\{12,20,17,18,1,3\}, \{18,17,19,15,10,3\}$

(iv) $\{\}, \{12,20,17,18,1,3\}$ (v) $\{12,20,17,18,1,3\}, \{12,20,17,18,1,3\}$

16. Which of the following are overlapping sets?

(i) $\{9,2,6,16\}, \{3,8,4,19\}$ (ii) $\{9,13,2,6,16,11,17\}, \{\}$ (iii) $\{9,13,2,6,16,11,17\}, \{3,8,17,4,19,13,11\}$

(iv) $\{9,2,6,16\}, \{3,8,17,4,19,13,11\}$ (v) $\{9,13,2,6,16,11,17\}, \{3,8,4,19\}$

17. Which of the following elements belong to the set {9,5,8,2,10}?

(i) 15 (ii) (-2) (iii) (-3) (iv) 9 (v) 16

18. Which of the following is 'intersection' symbol?

(i) ⊄ (ii) ∩ (iii) ⊆ (iv) ⊉ (v) ∈

19. Which of the following is 'minus' symbol?

(i) ⊇ (ii) − (iii) ∩ (iv) ∈ (v) ⊃

20. Which of the following is 'complement' symbol?

(i) ⊃ (ii) ⊄ (iii) ⊆ (iv) ' (v) ∩

21. Which of the following is 'subset' symbol?

(i) ⊂ (ii) ⊇ (iii) ↔ (iv) ∈ (v) ⊄

22. Which of the following is 'subset or equal to' symbol?

(i) ↔ (ii) ⊆ (iii) ⊉ (iv) ⊃ (v) ∩

23. Which of the following is 'not a subset' symbol?

(i) ↔ (ii) ⊉ (iii) ⊄ (iv) ⊆ (v) ⊇

24. Which of the following is 'superset' symbol?

(i) ⊂ (ii) ⊄ (iii) ∩ (iv) ⊃ (v) ⊆

25. Which of the following is 'superset or equal to' symbol?

(i) ∈ (ii) ∪ (iii) ⊄ (iv) ⊇ (v) ⊆

26. Which of the following is 'not a superset' symbol?

(i) ⊃ (ii) ∪ (iii) ∩ (iv) ⊉ (v) ↔

27. Which of the following is 'equivalent set' symbol?

(i) ∈ (ii) ⊃ (iii) ⊯ (iv) ↔ (v) ∪

28. Which of the following is 'belongs to' symbol?

(i) ⊂ (ii) ⊆ (iii) ↔ (iv) ⊯ (v) ∈

29. Which of the following is 'does not belongs to' symbol?

(i) ∩ (ii) ∉ (iii) ⊯ (iv) ⊂ (v) ↔

30. Which of the following is 'universal set' symbol?

(i) ↔ (ii) ⊆ (iii) ∪ (iv) ⊯ (v) μ

31. Which of the following is 'null set' symbol?

(i) ∉ (ii) ∩ (iii) ⊄ (iv) ∪ (v) ∅

32. Which of the following elements does not belong to the set {6,5,3,2,10}?

(i) 7 (ii) 2 (iii) 10 (iv) 3 (v) 5

33. Which of the following elements does not belong to the set {a,u,q,v,i}

(i) i (ii) v (iii) b (iv) u (v) q

34. Which of the following is not equal to set A = {1,6,9,0,2,4,7,3,8,10}?

(i) {3,9,7,4,6,1,8,0,2,10} (ii) {9,8,3,2,5,1,4,7,10,0} (iii) {0,6,10,9,3,8,2,7,4,1} (iv) {0,10,7,4,9,6,1,8,2,3}

(v) {3,6,8,9,4,1,2,7,10,0}

35. Which of the following is an empty set?

(i) {0} (ii) {} (iii) {empty} (iv) {o} (v) {∅}

36. Which of the following is a null set?

(i) ∅ (ii) {empty} (iii) {0} (iv) {o} (v) {∅}

37. Which of the following are null sets?

a) {empty}
b) {∅}
c) {5,7,8}
d) {}
e) ∅

(i) {a,d} (ii) {c,a,d} (iii) {b,e} (iv) {b,e,d} (v) {d,e}

38. Which of the following sets are not equivalent to set {10,5}?

a) {3,10,6}
b) {3,6}
c) {1,7}
d) {3,9}
e) {8,3,7,4}

(i) {b,a} (ii) {d,b,a} (iii) {c,e,a} (iv) {c,e} (v) {a,e}

39. Which of the following are equivalent sets?

a) {-2,-4,1,0,2,-9}
b) {2,-1,-2,-9,9,1,-7}
c) {1,5,-6,-1,7,9,6,-8,0}
d) {0,4,-3,2,-7,8,-2,-4}
e) {-9,5,6,-6,-8,-5,8}

(i) {a,b} (ii) {c,e} (iii) {d,a,b} (iv) {b,e} (v) {c,e,b}

40. Which of the following sets have same cardinality?

a) {-5,5,-8,-3,-7,6,-9}
b) {-5,-9,-4,7,3,-1,9,0,-3}
c) {-9,5,9,8,-6,3}
d) {-9,9,4,-4,6,-7,0,8}
e) {-1,9,7,3,-8,-5,4}

(i) {a,e} (ii) {c,e,a} (iii) {d,b,a} (iv) {b,a} (v) {c,e}

41. Which of the following diagrams represent equivalent sets?

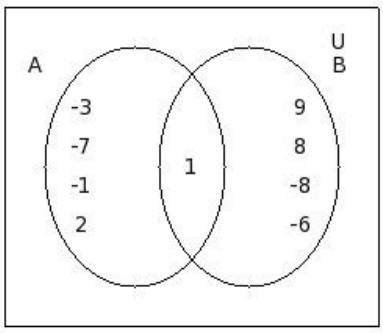


figure 1

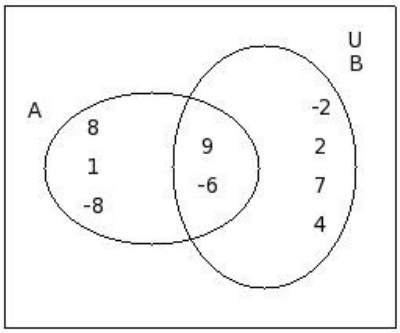


figure 2

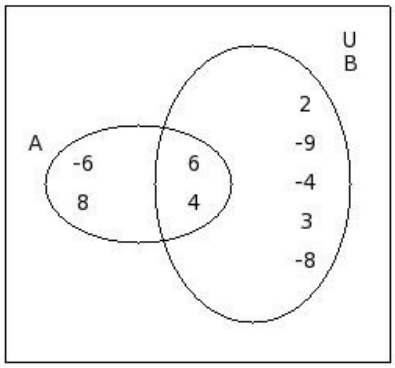


figure 3

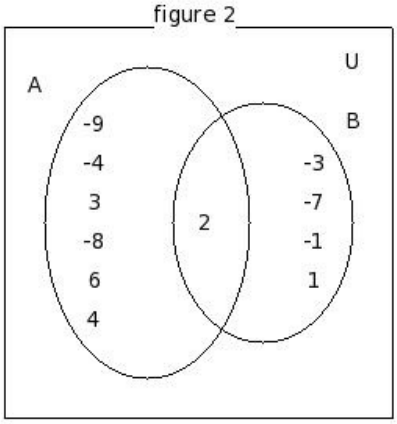


figure 4

(i) figure 1 (ii) figure 2 (iii) figure 3 (iv) figure 4

42. What is the cardinality of an empty set?

(i) 6 (ii) 0 (iii) 7 (iv) 2 (v) 4

43. Which of the following diagrams represent equal sets?

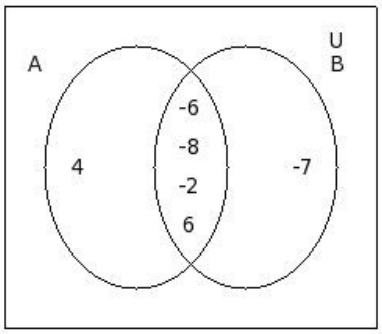


figure 1

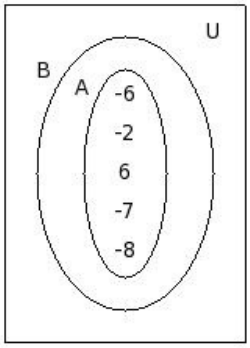


figure 2

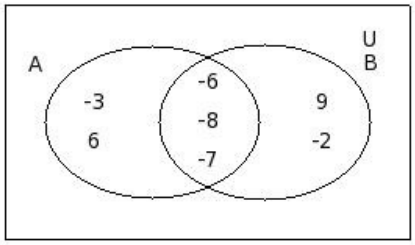


figure 3

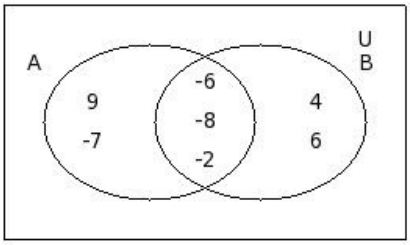


figure 4

(i) figure 4 (ii) figure 1 (iii) figure 2 (iv) figure 3

44. Which of the following symbols represent the set of Natural numbers ?

(i) Q (ii) Z (iii) R (iv) Q' (v) N

45. Which of the following symbols represent the set of Whole numbers ?

(i) W (ii) Q' (iii) Z (iv) R (v) Q

46. Which of the following symbols represent the set of Integers ?

(i) Q' (ii) Z (iii) R (iv) Q (v) W

47. Which of the following symbols represent the set of Rational numbers ?

(i) W (ii) Z (iii) N (iv) Q (v) Q'

48. Which of the following symbols represent the set of Irrational numbers ?

(i) Z (ii) R (iii) Q' (iv) W (v) Q

49. Which of the following symbols represent the set of Real numbers ?

(i) W (ii) Q' (iii) Z (iv) R (v) Q

50. Find the cardinality of A = {-7,6,-2,-4,4}

(i) 4 (ii) 6 (iii) 7 (iv) 5 (v) 2

51. If A = {-3,-6}, then n(A) = ?

(i) 0 (ii) 3 (iii) 1 (iv) 2 (v) 5

52. Which of the following is 'union' symbol?

(i) $\cup$ (ii) $\supset$ (iii) $\not\supset$ (iv) $\leftrightarrow$ (v) $\notin$

# Assignment Key

| | | | | | |
|---|---|---|---|---|---|
| 1) (iii) | 2) (v) | 3) (iv) | 4) (iv) | 5) (ii) | 6) (iii) |
| 7) (iii) | 8) (ii) | 9) (iv) | 10) (i) | 11) (ii) | 12) (ii) |
| 13) (i) | 14) (i) | 15) (i) | 16) (iii) | 17) (iv) | 18) (ii) |
| 19) (ii) | 20) (iv) | 21) (i) | 22) (ii) | 23) (iii) | 24) (iv) |
| 25) (iv) | 26) (iv) | 27) (iv) | 28) (v) | 29) (ii) | 30) (v) |
| 31) (v) | 32) (i) | 33) (iii) | 34) (ii) | 35) (ii) | 36) (i) |
| 37) (v) | 38) (v) | 39) (iv) | 40) (i) | 41) (i) | 42) (ii) |
| 43) (iii) | 44) (v) | 45) (i) | 46) (ii) | 47) (iv) | 48) (iii) |
| 49) (iv) | 50) (iv) | 51) (iv) | 52) (i) | | |