1. Rewrite the following examples using set notation
   (i) First ten even natural numbers. (ii) Set of days of a week. (iii) Set of months in a year which have 30 days. (iv) The numbers 3, 6, 9, 12, 15 (v) The letters m, a, t, h, e, m, a, t, i, c, s
2. Write the following set in roster form. (i) A = {x : x is an integer, - 3 < x < 7}
   (ii) B = {x : x is an integer, 4 < x < 12}
3. Represent the following sets in a selector method:
   (i) all numbers less than 15 (ii) all even numbers
4. Choose the correct answer:
   1. Set of even positive integers less than equal to 6 by selector method:
   (a) {x/x<6} (b) {x/x = 6} (c) {x/x ≤ 6} (d) None of these
   2. By Roster method, to express integers greater than 5 and less than (or) equal to 8
   (a) {5, 6, 7} (b) {5, 6, 7, 8} (c) {8} (d) {6, 7, 8}
   3. State Whether the following statements are correct:
   (i) {1, 2, 3} = {2, 3, 4} (ii) {1, 2, 3} = {1, 1, 2, 2, 3, 3} iii) {1, 2, 3} ⊆ {3, 2, 1}
   (iv) Ø ⊂ {1, 2, 3} (v) 4 ∉ {1, 2, 3}
   (a) (i) (ii) (b) (ii) (iii) (c) (iii) (iv) (d) (v) (iii)
   4. From the sets given below, pair the equal sets
   (i) A= {1, 2, 34} (ii) B = {p, q, r, s} (iii) C = {1, 4, 9, 16} (iv) D = {x, y, z, w}
   (v) E = {16, 1, 4, 9} (vi) F = {4, 2, 3, 1} (vii) G= {r, p, q, s}
   (a) (i) (ii) (b) (i) (v) (c) (i) (vi) (d) (ii) (vii)
   5.From the given sets pair the equivalent sets:
   (i) A= {4, 5, 6, 7} (ii) B = {0, Δ, } (iii) C = {a, b} (iv) D = {5} (v) E = {4,9} (vi) {1, 2, 3}
   (a) (ii) (i) (b) (iii) (v) (c) (vi) & (ii) (d) (iv) (v)
   6. Find which one of the following is a Null set
   (i) A = {x/x < x} (ii) B = {x/x + 2 = 2} (iii) {x/x is a positive number less than 0}
   (a) (i) (b) (ii) (c) (iii) (d) None
5. 8. Which one of the following is a singleton set?
   (i) $\{x / x^2 = x, x \in R\}$ (ii) $\{x / x^2 = -1, x \in R\}$ (iii) {x / 2x = 0} (iv) {x / 3x + 2 = 0 x∈N}
   (a) (i) (b) (ii) (c) (iii) (d) (iv)

II. Fill in the blanks:

6. If A = {1, 2, 3, 4}, B = {2, 4, 6}, then A Δ B is ____
7. If A and B are two sets then A ∩ (B-A) is _____
8. If A = {1, 2, 3}, B = {2, 3, 4}, C = {1, 2, 5, 6) then AU(B ∩ C) is _____
9. IF A and B are two sets then A ∩ B = A ∪ B if and only if _____
10. If A and B are two disjoint sets then n(A ∪ B) is equal to _____
11. A has 2 elements, B has 4 elements and A ⊂ B than A ∩ B has _____ elements
12. If A and B are the two sets of positive and negative integers respectively then AUB is _____

III. State whether the following statements are True (or) False:

13. (A ∩ B)′ = A′UB′
14. 2 ∈ {2, 3, 5}
15. {1} ⊂ {1, 2, 3}
16. “Equivalent sets are always equal

IV. Match the following:

Group A	Group B
(1) {x/x ∈N, 2x =5}	(A) 6
(2) $(A^c)^c$ =	(B) A´UB´
(3) A has 4 elements and B has 6 elements such that A⊂B then no. of elements in AUB is	(C) A
(4) (AB)´ =	(D) C
(5) If AUB = AUC then B =	(E) Null

17. (i) If n (A) = 20, n (B) = 12, n (A ∩ B) = 4, find n (A ∪ B)
    (ii) If n (A) = 41, n (B) = 19, n (A ∩ B) = 10, find n (A ∪ B)
    (iii) If n (A) = 12, n (B) = 20, and A ⊂ B, find n (A ∪ B)
    (iv) If n (A) = 24, n (B) =18 and B ⊂ A, find n (A ∪ B)
18. If A = {1, 2, 3, 4, 5}, B = {2, 4, 5, 8}, C = {3, 4, 5, 6, 7}, find A ∪ (B ∪ C) , Prove Associative and distributive properties.
19. If A = {4, 3, 6, 5}; B = {7, 5, 8} C = {5, 1 , 6, 2} then find (A ∩ C), A - (B ∪ C), (A∪B) - C A-C, A-B, B-C, C-A, C-B
20. If U = {1, 3, 5, 7, 9,11,13, 15,17, 19, 21 } ; A = { 3, 9, 15, 21} and B = { 1, 3, 5, 7, 11,13}, Prove De-Morgan's Law.