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Answers Key:

பகுதி - இ

அனைத்து வினாக்களுக்கும் விடையளி

1. A = {x : x = 6n, n∈W n<6 }
   x = 6n
   n = {0, 1, 2, 3, 4, 5} ⇒ x = 6 x 0 = 0
   x = 6 x 1 = 6
   x = 6 x 2 = 12
   x = 6 x 3 = 18
   x = 6 x 4 = 24
   x = 6 x 5 = 30
   ∴ A = {0,6,12,18,24,30}
   B = {x : x = 2n , n ∈ N, 2 < n ≤ 9 }
   n = {3, 4, 5, 6, 7, 8, 9}
   x = 2n ⇒ x = 2 x 3 = 6
   2 x 4 = 8
   2 x 5 = 10
   2 x 6 = 12
   2 x 7 = 14
   2 x 8 = 16
   2 x 9 = 18
   ∴B ={6,8,10,12,14,16,18}
   C = {x : x =3n , n∈N 4≤ n <10}
   N = {4, 5, 6, 7, 8, 9}
   x = 3 x 4 = 12
   x = 3 x 5 = 15
   x = 3 x 6 = 18
   x = 3 x 7 = 21
   x = 3 x 8 = 24
   x = 3 x 9 = 27
   ∴C = {12,15,18,21,24,27}
   A -(B∩C) = (A - B) ∪ (A- C)
   $B \cap C$ = {12,18}
   L.H.S = $A - (B \cap C)$ = {0,6,12,18,24,30} - {12,18} = {0,6,24,30} ....(1)
   (A-B) = {0,24,30}
   (A-C) = {0,6,30}
   R.H.S = $(A - B) \cup (A - C)$ = {0,6,24,30}...(2)
   (1) மற்றும் (2) லிருந்து $A - (B \cap C) = (A - B) \cup (A - C)$ என நிரூபிக்கப்பட்டது.

பகுதி - ஆ

அனைத்து வினாக்களுக்கும் விடையளி

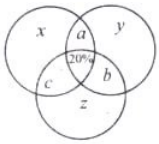
2. A= {a,b}
   A இன் உட்கணங்கள் ϕ,{a}, {b}, {a, b}.
3. U = {c, d, e, f, g, h, i, j}, A = {c, d, g, j}
   A′ ={e, f, h, i}
4. A – B = {–3, –2, 1, 4} – {0, 1, 2, 4} = { –3, –2}
   B – A = {0, 1, 2, 4} –{–3, –2, 1, 4} = { 0, 2}.
5. A – B = {6, 7, 9}
   B – A = {10, 12}
   A ∆ B = (A – B) ∪ (B – A) = {6, 7, 9} ∪ {10,12}
   A ∆ B = {6, 7, 9, 10, 12}.
6. n(A) = 36, n(B) = 10, n(A∪B) = 40, n(A′) = 27
   (i) n(U) = n(A) + n(A′) = 36 + 27 = 63
   (ii) n(A∩B) = n(A) + n(B) – n(A∪B) = 36 + 10 – 40 = 46 – 40 = 6.

பகுதி - அ

சரியான விடையினைத் தெரிவு செய்க.

7. (a) ஒருறுப்புக் கணம்
8. A = {x, y, z}
   A ன் உட்கணங்கள் = {x},{y},{z}, {x, y}, {y, z}, {x, z}, {x, y, z}, { }
9. (b) A = B
10. (b) {ø}

11. 40 + 35 + 20 + x = 100%
95 % + x = 100%
x = 5%



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