

Ex - 20(B)

$$1) \text{v)} 35b - (16b + 9b) \\ = 35b - 25b = 10b \quad \underline{\underline{\text{Ans}}}$$

$$2) \text{xiii)} x + y - (x + y - x) \\ = x + y - (x + y - x) \\ = x + y - y = x \quad \underline{\underline{\text{Ans}}}$$

$$\text{xv)} 3x + (2x - x + 2) \\ = 3x + (2x - x - 2) \\ = 3x + (x - 2) = 3x + x - 2 \\ = 4x - 2 \quad \underline{\underline{\text{Ans}}}$$

$$\text{xvii)} 5x^2 - (3x - x^2 - 4) \\ = 5x^2 - (3x - x^2 - 4) \\ = 5x^2 - 3x + x^2 + 4 \\ = 5x^2 + x^2 - 3x + 4 \quad \underline{\underline{\text{Ans}}}$$

$$\text{vi)} p + (q - r - s) - (p - q - r) \\ = p + q - r - s - p + q + r \\ = p - p - q + q - r + r - s \\ = -s \quad \underline{\underline{\text{Ans}}}$$

$$\text{xviii)} -(y - x) - (x + y - 2x + y) \\ = -(y - x) - (x + y - 2x - y) \\ = -y + x - x - y + 2x + y \\ = x - x + 2x - y - y + y \\ = 2x - y \quad \underline{\underline{\text{Ans}}}$$

$$\begin{aligned}
 3) \text{ v) } p + 2(q - rpp) &= p + 2(q - r \cdot p) \\
 &= p + 2q - 2rp - 2p \\
 &= p - 2p + 2q - 2r \\
 &= -p + 2q - 2r \quad \underline{\text{Ans}}
 \end{aligned}$$

$$\begin{aligned}
 \text{viii) } 5 - \{a^2 - a(a - a - 2)\} & \\
 &= 5 - \{a^2 - a(a + 2)\} \\
 &= 5 - \{a^2 - 2a\} \\
 &= 5 - a^2 + 2a = -a^2 + 2a + 5
 \end{aligned}$$

Flow

- i) $(23 - 15) + 4 = 8 + 4 = 12$
- ii) $5x + (3x + 7) = 5x + 10x = 15x$
- iii) $6m - (4m - m) = 6m - 3m = 3m$
- iv) $(9a - 3a) + 4a = 6a + 4a = 10a$
- v) $(3y + 8y) - 5y = 11y - 5y = 6y$

- 2) i) $12x - (5x + 2x) = 12x - 7x = 5x$
- ii) $10m + (4n - 3n) - 5n = 10m + n - 5n = 10m - 4n$
- iii) $(15b - 6b) - (8b + 4b) = 9b - 12b = -3b$
- iv) $-(-4a - 8a) = -(-12a) = 12a$
- v) $(a + b) - (c + d) - (e - f) = a + b - c - d - e + f$
- vi) $3x + (8x - 5x) - (7x - x) = 3x + 3x - 6x = 6x - 6x = 0$
- vii) $a - (a - b - c) = a - a + b + c = b + c$
- viii) $6a^2 + (2a^2 - a^2) - (a^2 - b^2) = 6a^2 + a^2 - a^2 + b^2 = 6a^2 + b^2$
- ix) $2m(3n + 2m - 6n) = 2m - 3m - 2n + 6n = -m + 4n = 4n - m$
- x) $-mn - (-m) - m = -m + n + m - m = -m - n$
- xi) $25y - (5x - 10y + 6x - 3y) = 25y - 5x + 10y - 6x + 3y = 25y + 10y + 3y - 5x - 6x = 38y - 11x$
- xii) $a - (2a - 4a + 3a) = a - (2a - 4a - 3a) = a - 2a + 4a + 3a = 8a - 2a = 6a$

$$\text{ii) } x - (y-z) + x + (y-z) + y - (z+x) = x - y + z + x + y - z + y - z - x = x + x - x - y + y + z - z - z = x + y - z$$

$$\text{iii) } x - [y + \{x - (y+x)\}] = x - [y + \{x - y - x\}] = x - [y + x - y - x] = x - y - x + y + x = x - x + x - y + y = x$$

$$\text{iv) } 4x + 3(2x - 5y) = 4x + 6x - 15y = 10x - 15y$$

$$\text{v) } 2(3a - b) - 5(a - 3b) = 6a - 2b - 5a + 15b = 6a - 5a + 15b - 2b = a + 13b$$

$$\begin{aligned} \text{vi) } a - [-\{- (a-b-c)\}] &= a - [-\{- (a-b+c)\}] \\ &= a - [-\{- a + b - c\}] \\ &= a - [+ a - b + c] \\ &= a - a + b - c = b - c \end{aligned}$$

$$\begin{aligned} \text{vii) } 3x - [5y - \{6y + 2(10y - x)\}] \\ &= 3x - [5y - \{6y + 20y - 2x\}] \\ &= 3x - [5y - 6y - 20y + 2x] \\ &= 3x - 5y + 6y + 20y - 2x \\ &= 3x - 2x + 6y + 20y - 5y \\ &= x + 21y \end{aligned}$$