

$$3x^3 - 5x^2 + 8x + 10$$

~~$$16x^3 - 6x - 23$$~~

~~$$+ 9x^2 - 4x + 15$$~~

$$18x^3 + 4x^2 - 2x + 2$$

19 B

i) $3a + 4b + 7c - 5a + 3b - 6c + 4a - 2b - 4c$

$$= 2a + 5b - 3c$$

ii) $2x^2 + xy - y^2$

$$-x^2 + 2xy + 3y^2$$

$$+ 3x^2 - 10xy + 4y^2$$

$$4x^2 - 7xy + 6y^2$$

iii) $x^2 - x + 1 - 5x^2 + 2x - 2 + 3x^2 - 3x + 1 = -1x^2 - 6x + 0$

iv) $a^2 - ab + bc + 2ab + bc - 2a^2 - 3bc + 3a^2 + a$
 $= 6a^2 - 4ab + 5bc + a$

v) $4x^2 + 7 - 3x + 4x - x^2 + 8 - 10 + 5x - 2x^2 = 7x^2 - 5x + 5$

vi) $3x + 4xy - y^2 + xy - 4x + 2y^2 + 3y^2 - x + 6x = 3x + 5xy + 5y^2$

$$\begin{array}{r}
 2.) \quad -17x^2 - 2xy + 23y^2 \\
 15x^2 - 7xy + 9y^2 \\
 13x^2 - 4xy + 3y^2 \\
 \hline
 45x^2 - 13xy + 35y^2
 \end{array}$$

$$\begin{array}{r}
 2.ii) \quad -x^2 - 3xy + 3y^2 + 8 \\
 3x^2 - 4xy + 5y^2 + 3 \\
 \hline
 2x^2 - 7xy + 8y^2 + 11 \\
 \hline
 4x^2 - 13xy + 9y^2 + 13
 \end{array}$$

$$\begin{array}{r}
 2.iii) \quad a^3 - 2b^3 \\
 2a^3 - b^3 \\
 4a^3 - 2b^3 \\
 5a^3 - 2b^3 \\
 a \quad b \\
 \hline
 11a^3 - 2b^3
 \end{array}$$

$$3.i) \quad 3a - (a + 2b) = 2a - 2b$$

$$ii) \quad (3x - 3y) - (x + y) = 2x - 4y$$

$$iii) \quad (8a + 15b) - (3b - 7a) = 15a + 12b$$

$$iv) \quad (8x + 7y) - (4y - 3x) = 11x + 3y$$

$$v) \quad 7 - (4a - 5) = 12 - 4a$$

$$vi) \quad (6y - 13) - (4 - 7y) = 11y - 17$$

$$\begin{array}{r}
 4.i) \quad 5a - 3b + 2c \\
 - a + 4b + 2c \\
 \hline
 4a - 7b + 4c \\
 3a - 9b + 0c
 \end{array}$$

$$\begin{array}{r}
 ii) \quad 5 - a - 4x - 6y + 3z \\
 12x + 9y + 21z \\
 4x + 5y - 3z \\
 \hline
 8x + 14y + 18z
 \end{array}$$

$$\begin{array}{r}
 iii) \quad 5 - a - 4b + 4c \\
 5a - 7b + 2c \\
 \hline
 4a - 7b + 2c
 \end{array}$$

$$\text{iv) } \begin{array}{r} -8x - 12y + 17z \\ \hline x - y + z \\ \hline -9x \quad 11y \quad 16z \end{array}$$

$$\text{v) } \begin{array}{r} 2ab + ca - ac - 2bd \\ ab + 2ca - 2ac - bd \\ \hline 2ab + 7cd - 8ac - bd \end{array}$$

$$\text{5 i) } \cancel{a^2b^2} + 0ab + a^2b^2 + 0bc + 0ca$$

$$\text{5 ii) } -2x - y - 2$$

$$\text{5 iii) } 2p - \frac{4}{3}q - \frac{1}{2}r$$

$$\text{5 iv) } \cancel{0} - 0a + 0a^2$$

$$6. \quad 2x - y - 2z$$

$$7. \quad 2a + 2b + 3c$$

$$8. \quad 3x + 2y - z$$

$$9. \quad \cancel{0}$$