(ix)

$$4x^3 - 16x^2 + 6x - 8$$
$$\times \quad 3 + 2x - x^2$$

$$12x^3 - \cancel{20}\,300x^2 + 18x - 24$$

$$8x^4 \quad 20x^3 + 12x^2 - 16x \dots$$

$$=$$

$$4x^5 + 10x^4 - 6x^2 + 8x^2$$
$$4x^5 + 18x^4 - 14x^3 - 10x^2 + 2x - 24 \quad (Ans)$$

$$=$$

(1a)

$$a+b$$
$$\times\ a+b$$
$$\overline{\qquad\qquad}$$
$$a^2+ab$$
$$ab+b^2$$
$$\overline{\qquad\qquad}$$
$$a^2+2ab+b^2 \quad (Ans)$$

(v)

$$ax-b$$
$$\times\ 2ax-2b^2$$
$$\overline{\qquad\qquad}$$
$$2a^2x^2 - 2abx + 2ab^2x - 2b^3 \quad (Ans)$$

(vi)

$$2a-b+c$$
$$\times\ 2a-4b$$
$$\overline{\qquad\qquad}$$
$$4a^2-2ab+2ac$$
$$-8ab+4b^2-12bc$$
$$\overline{\qquad\qquad}$$
$$4a^2-10ab+6ac+4b^2-12bc \quad (Ans)$$

(vii)

$$3m^2+6mn-2n$$
$$\times\ 5n-3m$$
$$\overline{\qquad\qquad}$$
$$15m^2n+30mn^2-10n^2-9m^3-18m^2$$
$$+\ 6mn$$
$$\overline{\qquad\qquad}$$
$$15m^2n+36mn-10n^2-9m^3-18m^2 \quad (Ans)$$

(viii)

$$6-3x+2x^2$$
$$\times\ 1+5x-x^2$$
$$\overline{\qquad\qquad}$$
$$6-3x+2x^2$$
$$+\ 30x-15x^2+10x^3$$
$$-\ 6x^2+3x^3-2x^4$$
$$\overline{\qquad\qquad}$$
$$6+27x-19x^2+13x^3-2x^4$$

(vii) $-3m^3n + 5mn - 4mn^2$ and $6m^2n$

= $6m^2n - 8m^2n + 5mn - 4mn^2$

= $6m^2n \times (-3m^2n)$ (+) $6m^2n \times 5mn$ + $6m^2n \times (-4mn^2)$

= $-18m^4n^2$ (+) $30m^3n^2 - 24m^3n^2 n^3$ (Ans)

(viii) $6xy^2 - 7x^2y^2 + 10x^3$ and $-3x^2y^3$

= $-3x^2y^3 (6xy^2) - 7x^2y^2 + 10x^3)$

= $-3x^2y^3 \times 6xy^2 + (-3x^2y^3)(-7x^2y^2) + (-3x^2y^3) \times 10x^3$

= $-3x^3 y^5 + 21x^4 y^5 - 30 x^5 y^3$ (Ans)

= $18x^2 y^5 + 21x^4 y^5 - 30 x^5 y^3$ (Ans)

2. (i)

= $3a + 2b$
  $x \quad -3xy$
  $-9axy - 6bxy$ (Ans)

(ii)
  $9x - 5y$
  $x \quad -3xy$
  $-27x^2y + 15xy^2$ (Ans)

(iii)
  $3xy - 2x^2 - 6x$
  $x \quad -5x^2y$
  $-15x^3y^2 + 10x^4y + 30x^3y$ (Ans)

Ex - 11 (c)

Multiply

(i) 3x, 5x²y and 2y

(iv) (6a-5b) and -2a

$= 3x + 5x^2y \times 2y$

$= -2a (6a - 5b)$

$= -2a \times 6a \ at \ (-2a)(-5b)$

$= 3 \times 5 \times 2 \times x \times x^2 \times y \times y$

$= -12a^2 + 10ab \ (Ans)$

$= 30 x^3 y^2 \ (Ans)$

(v) 4a + 5b and 4a - 5b

$$4a + 5b$$
$$\times \quad 4a - 5b$$
$$16a^2 + 20ab$$
$$\underline{\quad -20ab - 25b^2}$$
$$16a^2 - 25b^2 \ (Ans)$$

(ii) 3a, 6 and 2ab²

$= 5, \ 3a \times 2ab^2$

$= 5, \ 3a \times 2 \times a \times a \times ab^2$

$= 30 a^2 b^2 \ (Ans)$

(vi) 9xy + 2y² and +2x - 3y

$= 9xy + 2y^2$
$\times \quad 2x - 3y$

$18x^2y + 4xy^2$
$\quad - 27xy^2 - 6y^3$

$18x^2y - 23xy^2 - 6y^3 \ (Ans)$

(iii) 5x + 2y and 3xy

$3xy (5x + 2y)$

$= 3xy \times 5x + 3xy \times 2y$

$= 15 x^2y + 6 xy^2 \ (Ans)$