



## Section A

**Q1.** Factorize  $10a(2p + q)^3 - 15b(2p + q)^2 + 35(2p + q)$

**Q2.** Factorize

(i)  $ab(x^2 + y^2) - xy(a^2 + b^2)$

(ii)  $(ax + by)^2 + (bx - ay)^2$

**Q3.** Factorize

(i)  $36p^2 - 60pq + 25q^2$

(ii)  $4x^2 - 169y^2$

(iii)  $(2a + 3b)^2 - 16c^2$

(iv)  $9(3x + 2)^2 - 4(2x - 1)^2$

(v)  $9(a + b)^3 - 25(a + b)$

(vi)  $x^4 - y^4 + x^2 - y^2$

**Q4.** Factorize :

(i)  $7 + 10(2x - 3y) - 8(2x - 3y)^2$

(ii)  $\frac{4x^2}{9} - \frac{9y^2}{9}$

(iii)  $(a - b)^2 - (b - c)^2$

## Section B

**Q5.** The area of a square is  $9x^2 + 24xy + 16y^2$ . Find the side of the square.

**Q6.** The area of a circle is given by the expression  $\pi x^2 + 6\pi x + 9\pi$ . Find the radius of the circle.

**Q7.** The base of a parallelogram is  $(2x + 3)$  units and the corresponding height is  $(2x - 3)$  units. Find the area of the parallelogram in terms of  $x$ . What will be the area of parallelogram of  $x = 30$  units?



**Q8.** The radius of a circle is  $7ab - 7bc - 14ac$ . Find the circumference of the circle. ( $\pi = 22/7$ )

**Q9.** Match the expressions of column I with that of column II:

Column I	Column II
(1) $(21x + 13y)^2$	(a) $441x^2 - 169y^2$
(2) $(21x - 13y)^2$	(b) $441x^2 + 169y^2 + 546xy$
(3) $(21x - 13y)(21x + 13y)$	(c) $441x^2 + 169y^2 - 546xy$
	(d) $441x^2 - 169y^2 + 546xy$

### Section C

**Q11.**  $16(2l - 3m)^2 - 12(3m - 2l)$

**Q12.**  $4(x + y)(3a - b) + 6(x + y)(2b - 3a)$

**Q13.**  $25(2x - y)^2 - 16(x - 2y)^2$

**Q14.**  $25(x - 2y)^2 - 4$

**Q15.**  $12(a + b)^2 - (a + b) - 35$

**Q16.**  $1 - 3x - 3y - 4(x + y)^2$

**Q17.** Factorise  $xy^2 - xz^2$ , Hence, find the value of

(i)  $9 \times 8^2 - 9 \times 2^2$

(ii)  $40 \times 5.5^2 - 40 \times 4.5^2$