Chapter 7 : Algebra

A : **Choose the correct alternatives in each of the following :** **(1 × 5 = 5)**

1. The co-efficient of $-y^2z$ in $25xy^2z$ is
   (a) $25x$ (b) $-25x$ (c) $25xz$ (d) none of these

2. The like terms in the expression $2x^2 + y^2 - 3x^2 - 2z^2x$ are
   (a) $2x^2, -3x^2$ (b) $-3x^2, 2x$ (c) $2x^2, -2z^2x$ (d) $-3x^2, -2z^2x$

3. If $a = -1$, $b = -2$, then the value of $5a - 3b$ is
   (a) -1 (b) 1 (c) 11 (d) -11

4. On solving $4x - 4 = 16$, we get
   (a) $x = 5$ (b) $x = 4$ (c) $x = 3$ (d) $x = 1$

5. One book weighs 350 g and one notebook weighs 250 g. The weight of $2x$ books and y notebooks (in g) is
   (a) $350x + 250\,y$ (b) $700x + 250y$ (c) $350x + 500y$ (d) $700x + 500y$

B : **Solve the following :**

1. Write algebraic expression for the following : **(3 × 5 = 15)**
   (i) x more than one-third of y.
   (ii) Half a number x decreased by 3 is equal to 9.
   (iii) 5 added to thrice of x.
   (iv) The sum of angles of a triangle is equal to 180°.

2. If $x = 1$, $y = -2$, $z = 3$, find the value of $x^2 - 2y - z + 4$.

3. Solve the following equations :
   (i) $3x + 7 = 19$ (ii) $2x + 3 = x + 4$

4. Three times a number decreased by 6 gives 12. Find the given number.

5. The length of a rectangle is 2 cm more than its breadth, and its perimeter is 28 cm. Find the length and breadth of the rectangle.