MATHEMATICS IN EVERYDAY LIFE–8

CORDOVA™

Chapter 6 : Algebraic Expressions and Identities

ASSESSMENT
Max.Marks : 20

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

1. The degree of the polynomial $15x^3 - 3x^2y^2 - 8y^2 + 25$ is

(*a*) 1 (*b*) 2 (*c*) 3 (*d*) 4

2. Which of the following is not a polynomial?

(*a*) $x^2 + 3x + 7$ (*b*) $9x^3 + \frac{3}{7}x^2 + 5$ (*c*) $\frac{2}{x} + \frac{5}{x^2}$ (*d*) $\frac{3x^2 + 6}{3}$

3. The degree of the product of $x^3 + 3x^2 - 5x + 4$ and $(x - 1)$ is

(*a*) 4 (*b*) 1 (*c*) 2 (*d*) 3

4. If $x + \frac{1}{x} = 3$, then the value of $x^2 + \frac{1}{x^2}$ is

(*a*) 5 (*b*) 7 (*c*) 9 (*d*) 11

5. The value of $(x^2 - 16) - (x - 4)(x + 4)$ is

(*a*) 0 (*b*) $(x - 4)$ (*c*) $(x + 4)$ (*d*) none of these

B : Solve the following : **(3 × 5 = 15)**

1. Find the area of a rectangular field whose length and breadth are $(x^2 - 9)$ m and $(x + 3)$ m respectively.

2. If $x^4 + \frac{1}{x^4} = 623$, then find the value of $x + \frac{1}{x}$.

3. Show that $(x - y)(x + y) + (y - z)(y + z) + (z - x)(z + x) = 0$.

4. Evaluate: $\frac{4.73 \times 4.73 - 2.23 \times 2.23}{4.73 + 2.23}$.

5. Find the product of $(x^3 + 2x^2 - 5x + 1)$ and $(x^2 + 7x + 1)$. Also, verify the result by taking $x = -1$.