IX Class

POLYNOMIALS

Exercises 1 to 3

I. One mark questions:

1. Find the value of $\sqrt[3]{3}x^3$ when $x = -1.5$

2. If $A = 3x^3 - x + 4x^2 - 1$, $B = 5 - 3x^2 + 4x^3 + 4x$, find $A + B$.

3. If $A = 5x^3 - 3x^2 + 2x - 5$, $B = 3x^3 - x^2 - x + 2$, find $A - B$.

4. Find the product of $(3x^2 - 5x + 6)$ and $(4x - 3)$.

5. $A = 3x^2 - 4x + 5$, $B = x^2 - 2x - 1$, find $B \times A$.

6. Divide: $(2x^5 + 6x^2 - 2)$

7. Simplify: $(2x^2 + 2x + 3)(5 + 2x)$

8. Write the additive inverse of the polynomial $x^2 + 3x - 1$

II. Choose the correct answer:

9. The degree of the monomial $-2x^4$ is
   a) 1  
   b) -2  
   c) -1  
   d) 4

10. The co-efficient of the monomial $-1.2x^3$ is
    a) 3  
    b) -1.2  
    c) 0  
    d) none

11. The co-efficient of $\sqrt{3x^2}$ is
    a) $\sqrt{3}$  
    b) 1  
    c) 3  
    d) 2

12. Degree of the monomial $\sqrt[3]{3}x^3$ is
    a) $\frac{2}{3}$  
    b) 3  
    c) $\frac{3}{2}$  
    d) 1

13. Simplified form of $(0.5x^2) + (1.3x^2) + (-5.1x^2) - (-2.8x^2)$ is
    a) $4.6x^2$  
    b) $-0.5x^2$  
    c) $0.5x^2$  
    d) $0.6x^2$

14. The additive inverse of $x^2 - x + 2$ is
    a) $-x^2 + x - 2$  
    b) $x^2 + x + 2$  
    c) $x^2 + x - 2$  
    d) $-x^2 - x - 2$
15. The additive identity of polynomials is [ ]
   a) 1  b) x  c) 0  d) none
16. Addition of polynomials is [ ]
   a) Closure  b) Commutative  c) Associate  d) All the above
17. \[ A = 2x + 3, \ B = x^3 - 1 \] then \[ A \times B \] [ ]
   a) \(2x^3 - 2x - 3\)  b) \(2x^3 + 3x^2 - 2x - 3\)  c) \(3x^2 - 2x + 3\)  d) none
18. The value of \(7x^2\) when \(x = 0.7\) is [ ]
   a) 4.33  b) 34.3  c) 3.43  d) 43.3

III. Fill in the blanks:
19. The degree of \(-2.7\) is _________
20. If \(A = 3x - 1, \ B = -2x + 5\) then \(B - A = \) _____________
21. Co-efficient of \(-3.1 \ x^3\) is _________
22. The value of \(-2.3 \ x^3\) when \(x = -1\) is _________
23. \((0.6x^3) + (0.25x^3) - (1.7x^3) = \) _________
24. \(A = 4x^2 - 1, \ B = 3x^3\) then \(A \times B = \) _____________
25. \((3x^3 - x + 4x^2 - 1) + (x^3 + 5x + 5) = \) _____________
26. Multiplicative identity of polynomials is _____________