



**Maple Online Classes**  
**A-25 DLF Loni Ghaziabad UP 201301**

**TEST PAPER: POLYNOMIALS**  
**Class 09 - Mathematics**

**Time Allowed: 2 hours**

**Maximum Marks: 50**

**General Instructions:**

All the questions are compulsory.

1. Write the coefficient of  $x^2$  in  $2 - x^2 + x^3$  [1]
2. Write the coefficient of  $x^2$  in  $\frac{\pi}{2}x^2 + x$  [1]
3. Write the coefficient of  $x^2$  in  $\sqrt{2}x - 1$  [1]
4. Write the degree of the polynomial:  $5x^3 + 4x^2 + 7x$  [1]
5. Write the degree of the polynomial:  $4 - y^2$  [1]
6. Write the degree of the polynomial:  $5t - \sqrt{7}$  [1]
7. Write the degree of the polynomial : 3 [1]
8. Classify as linear, quadratic and cubic polynomials:  
 $y + y^2 + 4$  [1]
9. Classify as linear, quadratic and cubic polynomials:  
 $1 + x$  [1]

10. Classify as linear, quadratic and cubic polynomials:  $r^2$  [1]
11. Find  $p(0)$ ,  $p(1)$  and  $p(2)$  for the polynomial:  $p(x) = x^3$  [2]
12. Give one example of a binomial of degree 35, and of a monomial of degree 100. [2]
13. Classify as linear, quadratic and cubic polynomials:  $x^2 + x$  [2]
14. Find a zero of the polynomial  $p(x) = 2x + 1$  [2]
15. Find the value of  $p(x) = 5x^2 - 3x + 7$  at  $x = 1$  [2]
16. Divide  $p(x)$  by  $g(x)$ , where  $p(x) = x + 3x^2 - 1$  and  $g(x) = 1 + x$  [3]
17. Find the remainder obtained on dividing  $p(x) = x^3 + 1$  by  $x + 1$ . [3]
18. Find the value of  $k$ , if  $x - 1$  is a factor of  $4x^3 + 3x^2 - 4x + k$ . [3]
19. Factorise :  $x^3 - 23x^2 + 142x - 120$  [3]
20. Factorise :  $4x^2 + y^2 + z^2 - 4xy - 2yz + 4xz$  [3]
21. Expand  $(4a - 2b - 3c)^2$  [3]
22. Evaluate:  $(104)^3$  using a suitable identity. [3]
23. Evaluate  $105 \times 106$  without multiplying directly. [3]

24. Write  $(3a + 4b + 5c)^2$  in expanded form.

**[3]**

25. Factorise  $3x^2 - x - 4$

**[3]**