BHARATH COACHING CENTRE

9th CBSE	Polynomials	Total: 45
Maths		Time: 1.30hrs

SECTION - A $5 \times 1 = 5$

1. A polynomial of degree three is called a _____ polynomial.
2. A polynomial of one term is called a _____.
3. If $x - 2$ is a factor of $x^2 + 3ax - 2a$, then a is _____.
4. A line contains _____ points.
5. Two distinct points in a plane determine a _____ line.

SECTION - B $6 \times 2 = 12$

6. Find the remainder when $x^4 + x^3 - 2x^2 + x + 1$ is divided by $x - 1$.
7. Check whether -3 is a root of $f(x) = 2x^3 - 13x^2 + 17x + 12$.
8. If $x = 0$ and $x = 2$ are the polynomials $f(x) = 2x^3 - 5x^2 + ax + b$. find the values of a,b.
9. Simplify $(\frac{1}{3}x^2 - \frac{1}{9}x)^2$.
10. Simplify 0.9^2.
11. Find the zero of $f(x) = cx + d, c \neq 0$.

SECTION - C $7 \times 4 = 28$

12. Divide $f(x) = 3x^4 + 2x^3 - \frac{1}{3}x^2 - \frac{1}{9}x + \frac{2}{27}$ by $g(x) = x + \frac{2}{3}$.
13. If $x = \frac{4}{3}$ is a root of the polynomial $6x^3 - 11x^2 + kx - 20$, find the value of k.
14. If the polynomials $ax^3 + 4x^2 + 3x - 4$ and $x^3 - 4x + a$ leave the same remainder when divided by $(x - 3)$,find the value of a.
15. Find the product of $(x + \frac{1}{x})(x - \frac{1}{x})\left(x^2 + \frac{1}{x^2}\right)(x^4 + \frac{1}{x^4})$
16. If $x^2 + \frac{1}{x^2} = 27$, find $x - \frac{1}{x}$.
17. Write all the of Euclid axioms.
18. Write all the of Euclid postulates.