MM30 **Polynomials class X latest CBSE Pattern** Time 1h 10min

Section A 1 mark each

Q1. A linear polynomial is _____

Q2. Define a polynomial in one variable.

Q3. Is $x^2 + 6x + \sqrt{7}x$ a polynomial? Why?

Q4. Is $x^3 + \sqrt{x} - 5$ a polynomial? Why?

Q5. General form of polynomial of degree 5 is _____

Q6. Zero of of a polynomial is _____

Q7. A quadratic polynomial in one variable consists of maximum _____ terms.

Q8. Standard form of polynomial $x^3 - x + 5 + x^2$ is _____ or _____

Section B 2 marks each

Q9. Find a quadratic polynomial each with the given numbers as the sum and product of its zeros respectively $-\frac{1}{8}, \frac{1}{4}$

Q10. Find all the integral zeros of $x^3 - 3x^2 - 2x + 6$

Section C 3 marks each

Q11. Find the zeros of the quadratic polynomial $x^2 - 16$ and verify the relationship between the zeros and the coefficients

Q12. Form polynomials with zeros $-\frac{\sqrt{3}}{5}, \frac{\sqrt{3}}{5}$. How many such polynomials are possible?

Q13. Check whether the first polynomials is a factor of 2nd polynomial by applying division algorithm. $x^2 + 3x + 1$, $3x^4 + 5x^3 - 7x^2 + 2x + 2$

Q14. Obtain all zeros of $3x^4 + 6x^3 - 2x^2 - 10x - 5$, if two of its zeros are $\frac{\sqrt{5}}{\sqrt{3}}$ and $-\frac{\sqrt{5}}{\sqrt{3}}$.

Q15. Divide $3x^2 - x^3 - 3x + 10$ by $x - 1 - x^2$ and verify the division algorithm.

Q16. If $(x - 2)$ and $\left(x - \frac{1}{2}\right)$ are the factors of the polynomials $qx^2 + 5x + r$ prove that $q = r$.