

Sub-Maths (Polynomial)

Class- 10th (2019-20)

One mark questions-

- 1- Write the standard form of a quadratic polynomial with real coefficients
- 2- If the product of zeros of quadratic polynomial $f(x) = x^2 - 4x + k$ is 3, find the value of R.
- 3- Write the zeros of polynomial $x^2 - x - 6$ and $XB = -4$ then write the polynomial.
- 4- If x, B are the zeroes of a polynomial such that $= -6$ and write the polynom
- 5- For what value of R, -4 is a zero of polynomial $x^2 - x - (2k + 2)$

Two mark questions-

- 6- Find a quadratic polynomial, the sum and product of whose zeroes are $\sqrt{2}$ and $\frac{-3}{2}$ respectively. Also find its zeroes
- 7- Find the zeroes of polynomial $f(x) = 4\sqrt{3}x^2 + 5x - 2\sqrt{3}$ and verify the relationship between zeroes and its coefficients
- 8- Find a cubic polynomial with the sum, sum of the products of its zeroes taken two at a time and product of its zeroes are 2, -7, -14 respectively.
- 9- Divide the polynomial $f(x) = 14x^3 - 5x^2 + 9x - 1$ by $g(x) = 2x - 1$
- 10- If two zeroes of polynomial $f(x) = x^3 - 4x^2 - 3x + 12$ are $\sqrt{3}$ and $-\sqrt{3}$, then find its third zero.

Three mark question

- 11- If α and β are zeroes of polynomial $f(x) = x^2 - 5x + k$ such that $\alpha\beta = 1$ find value of k
- 12- Find all the zeroes of polynomial $f(x) = 2x^4 - 3x^3 - 3x^2 + 6x - 2$ if two of its zeroes are $\sqrt{2}$ and $-\sqrt{2}$
- 13- If α and β are the zeroes of $P(x) = 4x^2 - 5x - 1$, find the value of $\alpha^2 + \beta^2$
- 14- Verify that 3, -1 and $\frac{-1}{3}$ are the zeroes of the cubic polynomial $p(x) = 3x^3 - 5x^2 - 11x - 3$ and then verify the relationship b/w zeroes and its coefficients.
- 15- Divide the polynomial $f(x) = 3x^2 - x^3 - 3x + 5$ by the $g(x) = x - 1 - x^2$ and verify the division algorithm.

Four mark question

- 16- If two zeroes of polynomial $f(x) = x^4 - 6x^3 - 26x^2 + 138x - 35$ are $2 + \sqrt{3}$, find other zeroes
- 17- Find the values of a and b so that $x^4 + x^3 + 8x^2 + ax + b$ is divisible by $x^2 + 1$
- 18- If α and β are $(\alpha + 1)(\beta + 1) = 1 - C$
- 19- Draw the graph of Polynomial $f(x) = 2x - 5$ also, find the coordinates of the point where it crosses x-axis
- 20- If sum of the squares of zeroes of $f(x) = x^2 - 8x + k$ is 40, find value of k