**ASSIGNMENT (2020-21)**

**CLASS - X SUBJECT – MATHEMATICS CH- 2 (POLYNOMIALS)**

1. If $p\left(x\right)$ = $ax^{2}+bx+c$, then $\frac{c}{a}$ is equal to :

$\left(a\right) $0 $\left(b\right)$ 1 $\left(c\right)$ sum of zeroes $\left(d\right)$ product of zeroes

1. The quadratic polynomial whose zeroes are $\frac{3}{5}$ and $\frac{-1}{2}$ is

$\left(a\right) $ $10x^{2}-x-3$ $\left(b\right)$ $10x^{2}+x-3$ $\left(c\right)$ $10x^{2}-x+3$ $\left(d\right)$ none of these

1. The value of $m$ so that $4x^{2}-6x-m$ is divisible by $x-3$, is exact divisor of

$\left(a\right) $ 18 $\left(b\right)$ 45 $\left(c\right)$ 20 $\left(d\right)$ 36

1. Graph of a quadratic polynomial is a

$\left(a\right) $ straight line $\left(b\right)$ circle $\left(c\right)$ parabola $\left(d\right)$ ellipse

1. If 1 is a zero of the polynomial, $f\left(x\right)=x^{2}k^{2}-3xk+3x-1$, then the value of $k$ is :

$\left(a\right) $ -1 $\left(b\right)$ 2 $\left(c\right)$ -2 $\left(d\right) 0$

1. Write a quadratic polynomial with zeros 5 + √3 & 5 – √3.
2. What must be subtracted from the polynomial $f\left(x\right)=x^{4}+2x^{3}-13x^{2}-12x+21$, so that the resulting polynomial is exactly divisible by $x^{2}-4x+3 ?$
3. If the product of zeroes of $p\left(x\right)=\left(k-2\right)x^{2}-4x+k$ is 3, then find the value of $k.$
4. Find the zeroes of the cubic polynomial $x^{3}-12x^{2}+39x-28$, if the zeroes are in A.P.
5. If $\left(x+a\right)$ is a factor of the polynomial $x^{2}+px+q$ and $x^{2}+mx+n, $prove that $a= \frac{n-q}{m-p}$
6. If the polynomial $x^{4}+2x^{3}+8x^{2}+12x+8$ is divided by another polynomial $x^{2}+5$, the remainder comes out to be $px+q.$ Find the values of $p and q.$
7. . If  are the zeroes of the polynomial 8x2 – 4x + 2(k – 4) find k.
8. If α, β and γ are the zeroes of the polynomial 8x3 + 4x2 – 3x + 2 find α−1 + β−1 + γ−1.
9. If one of the root of the equation x2 – 3x + q = 0 is twice other, find the value of q.
10. Divide 7 + 18x + x2 – 4x3 by 3 + 3x – 4x2 and verify the division algorithm.