**Self-Assignment – 1**

**Topic: polynomials**

**Class: 10th Max. Marks: 25**

**Answer all questions. Each question carries ½ mark. 10 × ½ = 5M**

1. Akash says, “The degree of any constant is zero. So degree of zero is zero”. Do you agree with him? Justify.
2. If one of the zero of the polynomial x² - 4x + 1 is (2 + ), then what is the other zero?
3. Given α and β are the zeroes of the polynomial 2x² + 7x + 5, then find the value of α + β + αβ?
4. If (x + 1) is a factor of the polynomial ax4 + bx3 + cx² + dx + e, then write the relation among the coefficients?
5. “We can write a trinomial with degree 7” justify the statement by giving an example?
6. Find the degree of the polynomial (x² - 3) (x3 + 5x² - 2x + 1).
7. If the graph of a quadratic polynomial intersect the X – axis at two points, then the shape of the parabola is \_\_\_\_\_\_
8. Open upward B) open downward C) both A and B D) none of these
9. Find sum of zeroes of the polynomial ?
10. Give an example to quadratic polynomial having one zero?
11. Draw a rough graph of the polynomial ax² + bx + c where a < 0 and has no zeroes?

**Answer all questions. Each question carries 1 mark. 4 × 1 = 4M**

1. Given p(x) = x² - 4x + 3, then find p (3) – P (-3) ?
2. Find the zeroes of the polynomial p(x) = x² - 16?
3. If -2 is zero of the polynomial 3x² + 4x + 2k, then find the value of ‘k’?
4. At which point, the graph of y = ax + b intersects the X – axis?

**Answer all questions. Each question carries 2 marks. 4 × 2 = 8M**

1. Why and -1 zeroes of polynomial p(x) = 4x² + 3x – 1?
2. Find the quadratic polynomial whose zeroes are 2 and?
3. If two zeroes of the polynomial x3 – 5x² - 16x + 80 are equal in magnitude but opposite in sigh, then find the zeroes?
4. The zeroes of the polynomial (a² + 9) x² + 13x + 6a are reciprocal to each other. Then find the value of ‘a’?

**Answer all questions. Each question carries 4 marks. 2 × 4 = 8M**

1. Obtain all zeroes of x4 + 4x3 – 2x² - 20x – 15 if two of its zeroes are ?

Or

Find the zeroes of the quadratic polynomial 5x² - 4 – 8x and verify the relationship between the zeroes and coefficients?

1. Draw the graph of the quadratic polynomial x² + 3x – 4 and find the zeroes?

Or

Draw the graph of the quadratic polynomial x² - 9 and find the points where the graph intersects the X – axis?