OPTIMUM
INTERNATIONAL SCHOOL

CLASS – IX

Maths **Date:-25/04/2020**

CHAPTER 2 – POLYNOMIALS

- **Watch the online videos "POLYNOMIALS -Lectures no- 4,5 & 6" from Optimum Online E-Learning Platform and try to comprehend the concepts of division algorithm and remainder theorem . After that try to solve the questions given in your assignment.**

- **Lecture No. 04**
- **Lecture No. 05**
- **Lecture No. 06**

1. **By actual division, find the quotient and the remainder when $(x^4 + 1)$ is divided 4 by (x-1). Verify that remainder = f(1).**

2. **Verify the division algorithm for the polynomials p(x) = $2x^4 - 6x^3 + 2x^2 - x + 2$ and g(x) = x+2.**

   Using the remainder theorem, find the remainder, when p(x) is divided by g(x), where

3. **p(x) = $x^3 - 6x^2 + 9x + 3$, g(x) = x-1**

4. **p(x) = $2x^3 - 7x^2 + 9x - 13$, g(x) = x-3**

5. **p(x) = $3x^4 - 6x^2 - 8x - 2$, g(x) = x-2**

6. **p(x) = $2x^3 - 9x^2 + x + 15$, g(x) = 2x -3**

7. **The polynomials $(2x^3 + x^2 - ax + 2)$ and $(2x^3 - 3x^2 - 3x + a)$ when divided by (x-2) leave the same remainder. Find the value of a.**

8. **The polynomial p(x) = $x^4 - 2x^3 + 3x^2 - ax + b$ when divided by (x-1) and (x+1) leaves the remainders 5 and 19 respectively. Find the values of 'a' and 'b'. Hence find the remainder when p(x) is divided by (x-2)**

9. **If p(x) = $x^3 - 5x^2 + 4x - 3$ and g(x) = x-2, show that p(x) is not a multiple of g(x).**

10. **10. If p(x) = $2x^3 - 11x^2 - 4x + 5$ and g(x) = 2x+1, show that g(x) is not a factor of p(x).**