Step Academy official

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STUDENT NAME	
PAPER CODE	99377
TIME ALLOWED	60
Paper Date	07-02-2026

CLASS	New 1st Year (FSC/ICS)
SUBJECT	Mathematics
TOTAL MARKS	25
Paper Type	

Q1. Choose the correct answer. **5X1=5**

1. Leading coefficient of the equation $x^3+2x^2+3x+4=0$ is .....:

(A) 1 **(B)** 2 **(C)** 3 **(D)** 4

2. Dividend = (divisor)(quotient)+ .....:

(A) Zero **(B)** Remainder **(C)** Divisor **(D)** None of these

3. When $3x^4+4x^3+x-5$ is divided by x+1 the remainder is:

(A) 7 **(B)** 6 **(C)** -6 **(D)** -7

4. Synthetic division is a process of .....:

(A) Addition **(B)** Multiplication **(C)** Subtraction **(D)** Division

5. If x-a is factor of f(x) then f(x)=0, x=a is called:

(A) Root **(B)** Factor **(C)** Polynomial **(D)** Degree

Q2. write the answers of following questions. **5X2=10**

1 . Find remainder and quotient by simplifying the following: $(3x^2-x+2)\div(x-1)$

2 . If x+1 and x-2 are factors of x^3-px^2+qx+2. Using synthetic division, find the values of p and q.

3 . When the polynomial $4x^4+2x^3+kx^2+13$ is divided by x+1, the remainder is 16. Find the value of k.

4 . Divide the cube polynomial $3x^3-10x^2+13x-6$ by the linear polynomial x-2. Also find the quotient and remainder.

5 . Show that x-2 is a factor of $f(x)=x^3-7x+6$ without factorizing.

Q3. write the answers of following questions. **2X5=10**

1 . Solve a polynomial regression model P(x) $3x^3-4x^2+2x-5$. If a data point ar x=-1 is missing. What should be its predicted value?

2 . If (x-2) and (x+2) are factors of x^4-13x^2+36. Using synthetic division, find the other two factors.