

Workshop on Scilab

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Jointly organized by

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venue: **Bhaskaracharya Pratishthana**

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Assignment-II

Part -I

1. Solve the linear system

$$x + y + 2z - w = 3$$

$$2x + 5y - z - 9w = -3$$

$$2x + y - z + 3w = -11$$

$$x - 3y + 2z + 7w = -5$$

2. Solve the linear system

$$x + 2y + 3z = 9$$

$$2x - y + z = 8$$

$$3x - z = 3$$

3. Solve the linear system

$$x + 2y + 3z + 4w = 5$$

$$x + 3y + 5z + 7w = 11$$

$$x - z - 2w = -6$$

4. Solve the linear system

$$x + 2y + 3z = 0$$

$$x + y + z = 0$$

$$x + y + 2z = 0$$

$$x + 3y + 3z = 0$$

Part - II

1. Create the following functions

(a) $f(x) = x^4 + 3x - 5$

(b) $z = x^3 + y^2$

(c) $z = \sin(x^2 + y^2)$

(d) $z = \exp(x^2 + 4y), 0 \leq x \leq 1, 0 \leq y \leq 1$

2. Create the function

$$f(x) = x + 3, x \geq 2$$

$$f(x) = x, 0 \leq x \leq 2$$

$$f(x) = x - 5, x \geq 0$$

3. Write a function to compute the roots of the quadratic equation.

4. Write recursive function to produce n terms of fibonacci sequence.