SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)
B.Tech. IV Year I Semester Regular & Supplementary Examinations October/November-2025
MATLAB PROGRAMMING
(Open Elective – IV)

Time: 3 Hours
Max. Marks: 60

(Answer all Five Units 5 x 12 = 60 Marks)

UNIT-I

1	a	Use MATLAB to Interpret the roots of the polynomial $290-11x+6x^2+x^3$.	CO2	L3	6M
	b	Illustrate the MATLAB plotting commands with examples.	CO3	L4	6M

OR

2	List the different ways that you can get help in MATLAB. Write brief notes on MATLAB help system.	CO3	L1	12M

UNIT-II

3	a	Explain how Array addressing is done in MATLAB with examples.	CO3	L3	6M
	b	Write Element-by-Element operation on Element-by-Element Division.	CO1	L5	6M

OR

4	Describe about MATLAB array and discuss about the following functions with examples used in MATLAB program: (i) Zeros ( ). (ii) Ones ( ). (iii) Eye ( ).	CO1	L1	12M

UNIT-III

5	a	Discuss about Exponential and Logarithmic Functions in elementary mathematical function with appropriate commands.	CO3	L2	6M
	b	Explain how Trigonometric Functions and Hyperbolic Functions are handled by MATLAB. Give some examples.	CO2	L2	6M

OR

6	a	How Multiple-Input Arguments are handled in Anonymous Functions.	CO2	L1	6M
	b	Briefly explain importing wizard and excel data files in MATLAB.	CO5	L5	6M

UNIT-IV

7	a	Infer about Conditional Operations with suitable example.	CO5	L2	6M
	b	Explain "for loop" Statement in MATLAB With suitable example.	CO3	L5	6M

OR

8	a	What are the tools available in Interactive Plotting in MATLAB? Give suitable Example.	CO2	L1	6M
	b	How to plot Three-Dimensional functions in MATLAB with suitable example.	CO2	L2	6M

UNIT-V

9	a	Solve the following equations, using the matrix inverse method. $2x_1 + 9x_2 = 5$ $3x_1 - 4x_2 = 7$	CO1	L3	6M
	b	Elucidate how Cramer's Rule performed in MATLAB? with an example.	CO1	L5	6M

OR

10	a	Discuss about computational difficulties using theoretical linear algebra techniques.	CO5	L2	6M
	b	Discuss in brief about: i) Under determined system ii) over determined system.	CO4	L2	6M

*** END ***