

Code: 20EC2601A

**III B.Tech - II Semester – Regular / Supplementary Examinations
APRIL 2024**

**MATLAB PROGRAMMING
(Common to All Branches)**

Duration: 3 hours

Max. Marks: 70

Note: 1. This paper contains questions from 5 units of Syllabus. Each unit carries 14 marks and have an internal choice of Questions.
2. All parts of Question must be answered in one place.

BL – Blooms Level

CO – Course Outcome

			BL	CO	Max. Marks
UNIT-I					
1	a)	Explain the various Display formats used in MATLAB with examples.	L2	CO1	7 M
	b)	Explain about the elementary Math built-in functions in MATLAB.	L2	CO1	7 M
OR					
2	a)	Explain the various useful commands for managing variables of MATLAB.	L2	CO1	7 M
	b)	Write a MATLAB program to find the area of circle by executing command by providing an input of desired radius by user.	L3	CO2	7 M
UNIT-II					
3	a)	Discuss about creating 2-D array in MATLAB.	L2	CO1	7 M

	b)	Describe about built-in functions for handling arrays in MATLAB.	L2	CO1	7 M
OR					
4	a)	Write a MATLAB program to execute array multiplication with an example.	L3	CO2	7 M
	b)	Write the functions to do the following: i. create a 4*4 array A ii. reshape array A to size of 8*2 iii. flip array A to the left to right direction	L3	CO4	7 M
UNIT-III					
5	a)	Analyse the logarithmic axis plot in MATLAB.	L4	CO3	7 M
	b)	Write a MATLAB program to plot histogram and polar plot with an example.	L3	CO4	7 M
OR					
6	a)	Explain about how to create multiple figure windows in MATLAB.	L4	CO3	7 M
	b)	Illustrate a MATLAB program to create mesh plot.	L3	CO4	7 M
UNIT-IV					
7	a)	Explain about the Nested Loops and Nested conditional statements used in MATLAB.	L2	CO2	7 M
	b)	Develop a MATLAB program to find the largest number.	L3	CO4	7 M
OR					
8	a)	Explain, how do you construct a user defined function in MATLAB.	L2	CO1	7 M

	b)	Develop a MATLAB program to find the prime number.	L3	CO4	7 M
UNIT-V					
9	a)	Calculating polynomials with MATLAB For the polynomial : $f(x) = x^5 - 12.1x^4 + 40.59x^3 - 17.015x^2 - 71.95x + 35.88$ i. Calculate $f(9)$ ii. Plot the polynomial for $-1.5 \leq x \leq 6.7$	L2	CO2	7 M
	b)	Write steps to solve numerical integration in MATLAB with example.	L3	CO3	7 M
OR					
10	a)	Outline different curve fitting techniques used in MATLAB.	L4	CO3	7 M
	b)	Explain with an example, to find maximum or minimum of a function in MATLAB.	L3	CO3	7 M