PVP 20

Code: 20EC2601A

III B.Tech - II Semester – Regular Examinations – JUNE 2023

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 different Arithmetic operators used in MATLAB with examples.	L2	CO1	7 M
	b)	Illustrate the elementary math built in functions used in MATLAB with examples.	L3	CO2	7 M
OR					
2	a)	Define two variables, alpha=5π/9, beta=π/7. Using these variables, show that the following trigonometric identity is correct by calculating the value of the left and right sides of the equation. Cosα-Cosβ=2 Sin ½(α+β) Sin ½(β-α)	L2	CO1	7 M
	b)	Illustrate the significance of command window in MATLAB.	L3	CO2	7 M

UNIT-II					
3	a)	Find the solution for 4x+2y+3z=4, 3x+3y+4z=2, 4x+6y+6z=8 and explain its execution in MATLAB.	L3	CO2	7 M
	b)	Discuss about character strings, character string functions with suitable examples in MATLAB coding.	L2	CO1	7 M
OR					
4	a)	Develop a program for the following: Create two row vectors v=41:-3:29 and w=17:4:37. Then, by only using the name of the vectors (v and w), create a row vector u that is made from the elements of w followed by the elements of v.	L3	CO2	7 M
	b)	Illustrate the array division in MATLAB.	L3	CO2	7 M
UNIT-III					
5	a)	Explain the following 2-D plots used in MATLAB. i) bar ii) barh iii) stairs iv) stem	L4	CO4	7 M
	b)	Sketch the Plot y=tsin(t) for $0 \leq t \leq 100$ and see to it that Y-axis is amplitude and X-axis is time and title is y(t).	L3	CO4	7 M
OR					
6	a)	Explain with examples line, mesh and surface plots.	L4	CO3	7 M
	b)	Explain plotting multiple plots on the same page with an example.	L4	CO3	7 M

UNIT-IV					
7	a)	Illustrate relational and logical operators used in MATLAB.	L3	CO2	7 M
	b)	Develop a program to check the given number is a prime number or not.	L3	CO2	7 M
OR					
8	a)	Develop a program to find out the Fibonacci Series.	L3	CO2	7 M
	b)	Illustrate the syntax of if, if-else, and for loop Operators in MATLAB.	L3	CO2	7 M
UNIT-V					
9	a)	Illustrate the different methods of interpolation used in MATLAB.	L3	CO3	7 M
	b)	Develop the code to divide the polynomial $15X^5 + 15X^4 – 35X^3 – 19X^2 + 8X -15$ by the polynomial $6X^3 -4X +8$.	L3	CO4	7 M
OR					
10	a)	Discuss and analyze the solution of one-variable equation available in MATLAB.	L4	CO3	7 M
	b)	Explain the Finding minimum or maximum of a function in MATLAB.	L4	CO3	7 M