SVKM'S NMIMS

MUKESH PATEL SCHOOL OF TECHNOLOGY MANAGEMENT & ENGINEERING

Academic Year: 2022-2023

Program:B.Tech (CS/BS) Year: IV Semester: VII

Subject: IT Workshop Scilab / Matlab Time: 3PM to 3.45PM

Date: 25-08-22 No. of Pages: 1

Marks: 20

Test-I [SET-B]

Instructions: Candidates should read carefully the instructions.
All questions are compulsory.

Q1	a.	List any four weaknesses of MATLAB	2
	b.	Which command is used to keep track of MATLAB session? Explain with the help of an example	2
	c.	Create a variable pounds to store weight in pounds. Convert this to kilograms and assign the result to a variable kilos. The conversion factor is 1kg = 2.2 lb	2
	d.	Create the following row vectors using colon operator: i) 8 6 4 2 ii)1.1000 1.3000 1.5000 1.7000	2
	e	List any 4 matrix operators	2
Q2		The distance between two points (x1, y1, z1) and (x2, y2, z2) in a three-dimensional Cartesian coordinate system is given by the equation $d = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2 + (z_1 - z_2)^2}$ i) Write a program to calculate the distance between any two points (x1, y1,z1) and (x2, y2, z2) specified by the user. Use good programming practices in your program. Use the program to calculate the distance between the points (3, 2, 5) and (3, 6, 5).	5 (3)

		ii) Show variables in the workspace window.	(1)
		iii)Remove all the text from the command window	(1)
Q3		Assume that matrix C is defined as shown, and determine the contents of the following submatrix: $\begin{bmatrix} 1.1 & -3.2 & 3.4 & 0.6 \\ 0.6 & 1.1 & -0.6 & 3.1 \\ 1.3 & 0.6 & 5.5 & 0.0 \end{bmatrix}$ i) Create matrix C ii) C(:,end) iii)C(1:2,2:end) iv) C([2 2],[3 3]) v) C(4:end)	5