

JAMIA HAMDARD
Department of Computer Science &
Engineering
School of Engineering Science &
Technology New Delhi-110062

Supplementary Examination 2023

Paper Name: IT Workshop (Sci Lab/ MATLAB)
Time: 3 Hours

Paper Code: BTCSE305
Maximum Marks: 75

Section-A				
ALL questions are compulsory in this Section (7 x 5 = 35 Marks)				
Q.No	Question	Marks	CO	BL
1.	Scilab is better than MATLAB. Justify this statement giving five examples.	5	1	L2
2.	Create the below matrix M in Scilab and answer the questions that follow: $M = [0, 1, 1; 2, 3, 5; 8, 13, 21]$ i) What is the dimension of matrix M? ii) Will you create the above matrix in SciNotes or Console? Explain why. iii) What is the use of semicolon(;)? iv) Write code to display the first row of M. v) Write code to display the last column of M.	5	4	L3
3.	Write a script in MATLAB to check if a number is odd or even.	5	3	L3
4.	Assuming N to be a 5 x 8 matrix, which of the following commands will give output for Scilab? If not, write the correct command. i) N (1:, 5) ii) M (:, 5) iii) N (\$:\$, \$:\$) iv) N (:\$, 3:6) v) N (: :)	5	5	L4
5.	Write a script in Scilab to check if a number is prime.	5	5	L3
6.	Explain the following for Scilab or MATLAB: i) Workspace ii) Colon (:) Operator iii) Dollar (\$) Symbol iv) Percentage (%) Symbol v) File Browser	5	1,4	L1

7.	i) A is a 5 x 5 matrix consisting only of odd numbers. Write the code in MATLAB to create the matrix A (Assume values). ii) What is a column vector? What will be the output of below command: B=A(2:5,5)	5	3	L3 L1 L4												
Section-B																
Attempt any FOUR Questions from this Section (4 x 10 = 40 Marks)																
1.	Write a program in Scilab with output to do the following: i) Create a matrix A of dimensions 6 x 4 (Assume values). ii) Display the fourth column and store it in a row vector B. iii) Display the odd numbers present in the matrix A. iv) Display the sum of last number of every row using the \$ sign. v) Delete the row vector B.	10	5	L3												
2.	i) Write a script in MATLAB to display the sum of prime numbers from 0 to 50. ii) Explain the various types of loops used in MATLAB.	10	1,3	L3 L1												
3.	Differentiate between the following by writing example code in MATLAB or Scilab: i) String Operations&Arithmetic Operations - ii) Switch case & if..else condition -	10	1,4	L2 L3												
4.	Describe any 5 matrix arithmetic operations in MATLAB with an example for each.	10	1,3	L1 L3												
5.	Give reasons why you <i>agree</i> or <i>disagree</i> with the following statements: i) <i>ANS</i> is not same as <i>ans</i> in MATLAB. ii) Bar Chart can be created in Excel but not in Scilab. iii) When generating a series of numbers a negativedecrement can be specified in MATLAB. iv) SciNotes is needed even when console is present in Scilab. v) % is used to access inbuilt variables in Scilab.	10	1,4	L2												
6.	i) Using Scilab write a function to test whether a given number is odd or even. ii) Using Scilab write the code and plot a graph of Date versus Max Temperature for Delhi in April for the data given in the table below: <table><tr><td>Date</td><td>10</td><td>11</td><td>12</td><td>13</td><td>14</td></tr><tr><td>Max Temperature (C)</td><td>38</td><td>39</td><td>39</td><td>40</td><td>41</td></tr></table>	Date	10	11	12	13	14	Max Temperature (C)	38	39	39	40	41	10	5	L3 L6
Date	10	11	12	13	14											
Max Temperature (C)	38	39	39	40	41											

BL- Bloom's Taxonomy Levels (1Remembering, 2Understanding, 3Applying, 4Analyzing, 5Evaluating, 6Creating)

CO-Course Outcome