SVKM'S NMIMS
SCHOOL OF TECHNOLOGY MANAGEMENT& ENGINEERING, NAVI-MUMBAI

Academic Year: 2022-2023

Program: BTech Stream: CSBS
Subject: IT Workshop/MATLAB
Date:22/08/2022
Marks: 20

Year: 4 Semester: VII
Time: 1hr (9AM to 10AM)
No. of Pages:01

Mid-Term Examination

Instructions: Candidates should read carefully the instructions printed on the question paper and on the cover of the Answer Book, which is provided for their use.

1) ~~**Question No. 1 is compulsory.**~~ All questions are compulsory.
2) **Each question carries equal marks.**
3) **Answer to each new question to be started on a new page.**
4) **Figures in brackets on the right-hand side indicate full marks.**
5) **Assume Suitable data if necessary.**

Q.No.	Statement of the question	CO/ SO/ BL	Marks
Q.1 (a)	Write the difference between constants, variables, matrix and vectors.	CO1/ BL1	(2)
Q.1 (b)	For 3 x 3 matrix, what is the difference between **fliplr(mat)** and **mat=fliplr(mat)**	CO1/ BL1	(2)
Q.1 (c)	Using built in function, create a vector *vec* which consist of 20 equally spaced points in the range $-\pi$ to π	CO1/ BL2	(2)
Q.1 (d)	Which of the following MATLAB calculations would result the value 1? i. 6/2*3 ii. 1+4/5 iii. 3^2/3*3 iv. None of the above	CO1/ BL1	(1)
Q.1 (e)	How to correctly define x,y and z as symbols in linear equation? i. Syms x y z ii. Syms x,y,z iii. Sym(x,y,z) iv. None of these.	CO1/ BL1	(1)
Q.2	Create a variable **rows** that is random integer in the inclusive range 1 to 5. Create a variable **cols** that is random integers in the inclusive range 1 to 5. Now create a matrix of all **zeros** with the dimension given by the values of **rows** and **cols**	CO1/ BL2,3	(6)
Q.3	For the following matrices: $A = \begin{bmatrix} 1 & 2 & 3 \\ 4 & -1 & 6 \end{bmatrix}$, $B = \begin{bmatrix} 2 & 1 & 3 \\ 1 & 5 & 6 \\ 3 & 6 & 0 \end{bmatrix}$, $C = \begin{bmatrix} 3 & 2 & 5 \\ 4 & 1 & 2 \end{bmatrix}$ i. 3*A ii. A.*C iii. A-B	CO1/ BL2,3	(6)