PVP 14

Code: EE6T6FE-E,CS6T5FE-C.

III B.Tech-II Semester–Regular/Supplementary Examinations March 2018

INTRODUCTION TO MATLAB
(COMMON TO EEE ,CSE)

Duration: 3 hours Max. Marks: 70

PART – A

Answer *all* the questions. All questions carry equal marks

11x 2 = 22 M

1.

a) Distinguish between Command Window and Command History in MATLAB.

b) Explain the effect of clc command w.r.t. Command Window and Workspace.

c) Given A = $\begin{bmatrix} 1 & 2 & 3 & 4 \\ 5 & 6 & 7 & 8 \\ 9 & 10 & 11 & 12 \end{bmatrix}$, What will be the output for A(2:3, 2:3)?

d) For matrix A as defined in (c), what is the output of the MATLAB command sum(A) ?

e) For the matrix A defined in (c), what is the MATLAB result of A .*(4*eye(4)) ?

f) In MATLAB, if x = [4,-3,2,1,9], what is the output of the following operation: z = (x>=2)

g) Distinguish mesh and surface plot.

h) How to plot multiple plots on the same page?

i) Which MATLAB command generates a two-dimensional representation of a three-dimensional surface?

j) Which MATLAB command generates 100 uniform random numbers between -5 and +5?

k) Write the use of symbol ^ in matlab.

PART – B

Answer any *THREE* questions. All questions carry equal marks.

3 x 16 = 48 M

2. a) Explain the elementary Math built in function with examples. 8 M

b) Explain script file with example. 8 M

3. a) Compute n! for positive integer n using 8 M

i) for loop.

ii) MATLAB command prod.

b) Solve the following three linear equations: 8 M

$x + y + z = 4$;

$2x + y + 3z = 7$;

$3x + 4y - 2z = 9$;

4. a) Explain how the properties of plot can be modified by taking an example program. 8 M

b) What is stem command? Explain how the following sequence is represented in MATLAB. 8 M

i) x[n] = { 1, 2, 3, 4, 5, -1, -2, -3}

ii) x[n] = 2^n

5. a) Explain the syntax of if, if-else, nested if-else structures in MATLAB. 8 M

b) Write a program in MATLAB to add first 20 numbers using While-loop. 8 M

6. a) Divide the polynomial $15X^5+35X^4-37X^3-19X^2+4X-15$ by the polynomial $5X^3-4X+3$? 8 M

b) Determine the solution of the equation $x.e^{-x} = 0.2$ and explain about the functions used. 8 M