

Code: EC6T6FE-E, IT6T5FE-B, ME6T6FE-C, CS6T5FE-E

**III B.Tech-II Semester–Regular/Supplementary Examinations–March 2019**

**MATLAB PROGRAMMING AND APPLICATIONS**  
**(Common for ECE, IT, ME & CSE)**

Duration: 3 hours

Max. Marks: 70

**PART – A**

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

11x 2 = 22 M

1.

- a) What is Edit Window? Explain.
- b) What is platform dependence in Matlab?
- c) Explain the special variables and constants used in MATLAB.
- d) How to generate a vector using the command *logspace*?
- e) What are character strings? Mention one example.
- f) Write syntax for for-end loop in Matlab.
- g) List the Matlab language specific features.
- h) Define interpolation.
- i) What are *ode23* and *ode45* built-in functions in Matlab?
- j) Write a short notes on specialized 2-D plots.
- k) Explain the command for subplot.

## PART – B

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

3 x 16 = 48 M

2. a) How to create, save and execute a script file in Matlab?

Explain with one example. 8 M

b) Plot  $y = 5 \sin (t) + 3 \cos (t)$  for  $0 \leq t \leq 10$ . Explain the procedure for printing plot. And also mention MATLAB commands used. 8 M

3. a) Explain different arithmetic and relational operators in Matlab. 8 M

b) Consider two different 2x2 matrices  $A = \begin{bmatrix} 1 & 3 \\ 4 & 5 \end{bmatrix}$  and  $B = \begin{bmatrix} 2 & 6 \\ 9 & 8 \end{bmatrix}$  perform  $A+B$ ,  $A-B$  and  $A./B$  and explain its execution in Matlab. 8 M

4. a) Explain break, continue and return commands in Matlab with Example. 8 M

b) Explain the procedure for saving and loading data. 8 M

5. a) Explain different curve fitting techniques used in Matlab 8 M

- b) Define Quadrature. What are the built-in functions available in Matlab for numerical integration? Explain in detail with example. 8 M
6. a) Write short notes on basic 2-D plots. Explain in detail plot, label, title and legend commands with an example. 8 M
- b) List and explain different commands in 3-D plots for visualization of 3-D data. 8 M