PVP 12

Code: IT5T5FE1, EE5T6FE1, EM5T6FE6, ME5T6FE7

III B.Tech - I Semester – Regular Examinations – November 2015

MATLAB
(Common for IT, EEE, ECM, ME)

Duration: 3 hours Max. Marks: 70

Answer any FIVE questions. All questions carry equal marks

1. a) Explain MATLAB Built-in functions with a neat sketch. 7 M

   b) Classify the MATLAB Windows with its significance. 7 M

2. a) Calculate the following quantities in MATLAB. The argument of these functions must be in radians. sin $\pi/6$, cos π, and tan $\pi/2$ 7 M

   b) Plot $y=\sin x$, $0 \le x \le 2\pi$, taking 100 linearly spaced points in the given interval. 7 M

3. a) Discuss the array operations in MATLAB with examples. 7 M

   b) Define matrix index manipulation with an example. 7 M

4. a) Define the computational steps to be involved in solving a determinant of a matrix with the help command. 7 M

b) Explain the method for solving Eigen values and Eigen vectors for a 3x3 matrix. 7 M

5. a) Explain script file and function file with an example in each category. 7 M

b) What is the process of executing a function inside another function with good functions and control flow? 7 M

6. a) Explain the steps involved in Solving a linear system of equations and solve

$5x = 3y - 2z + 10;$ $8y + 4z = 3x + 20;$

$2x + 4y - 9z = 9$ 7 M

b) Write briefly about Quadrature and solve first order linear differential equations $dx/dt = x+t$ with initial condition $x(0)=0$. 7 M

7. a) Give at least five examples in explaining the specialized 2-D plots with scripts. 7 M

b) Discuss in detail about the Surface and Mesh Plots and interpolated surface plots. 7 M

8. a) Explain how to save and load data in MATLAB and also about Math functions. 7 M

b) Write the built-in functions for character string manipulations. 7 M