

Lesson : 16

LINEAR ALGEBRAIC EQUATIONS

Date :

Aim

To write a MATLAB program or Code (function file) to find the solution for a simultaneous equation using numerical techniques.

Exercises

1. Naive Gauss Elimination technique
2. Gauss Jordan technique

Result

The program for solving the simultaneous equation using the Gauss Elimination and Gauss Jordan is coded and shown the screen shots.

Lesson : 17

LINEAR ALGEBRAIC EQUATION

Date :

Aim

To write a MATLAB program or Code (function file) to find the solution for a simultaneous equation using numerical technique

Exercises

1. Gauss Seidel
2. Jacobi

Result

A MATLAB code is written and executed for the given simultaneous equation using Gauss Seidel and Jacobi iterative techniques as shown in screen shots

Lesson : 18 **ROOTS OF A NON LINEAR ALGEBRAIC EQUATION**

Date :

Aim

To write a MATLAB program to find the root of a non linear equation using
Newton – Rapshon Technique

Result

A MATLAB program to find the root of a given non linear equation is written and executed as shown in the screen - shots.

PART III

CHEMICAL ENGINEERING APPLICATIONS

Lesson : 19

SIMPLE PROGRAMS TO SOLVE CHEMICAL

Date :

ENGINEERING PROBLEMS

Aim

To learn the use of MATLAB in solving some of the Chemical Engineering problems

Exercises

1. Compute the Dimensionless numbers
2. Finding a solution to spent acid mixing problem by material balance
3. Computing the volume occupied by the gas using Ideal gas law
4. Determination of specific volume by Redlich – Kwong
5. Solution to a Diffusion problem
6. Solution to a Heat transfer problem
7. Semilog plot for Arrhenius equation
8. Plot for laboratory photodegradation study

Result

Thus we learned the use of MATLAB in finding solution to some of chemical engineering problems.

Lesson : 20

SOLVING UNSTEADY PROBLEMS USING MATLAB

Date :

Aim

To use MATLAB to solve typical unsteady state problems in chemical engineering

Result

Thus we learned the use of MATLAB in finding solution to some of chemical engineering problems.