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| Discipline  **Electrical Engg.** | Semester: -  **6th** | Name of the Teaching Faculty: -  **LINCOLN MOHANTY** |
| Subject: -  **SIMULATION PRACTICE ON MATLAB** | No of Days/per Week Class Allotted: -  **4** | Semester From: -**2nd Jan, 2019**To: -**15th Apr, 2019**  No of Weeks: -**15** |
| **Week** | **Class Day** | **Theory/ Practical Topics** |
| 1st | 1st | 1. **Introduction to MATLAB programming:**  1.1. Functions and operation using variables and arrays.  1.1.1. To learn algebraic, trigonometric and exponentialmanipulation. |
| 2nd | 1.1.2. To learn Arithmetic, Relational and Logic operator |
| 2nd | 1st | 1.2. Matrix formation and its manipulation |
| 2nd | 1.2. Matrix formation and its manipulation (Contd..) |
| 3rd | 1st | 1.3. Vector manipulation:  1.3.1. Use of linspace to create vectors. |
| 2nd | 1.3.2. To create, add and multiply vectors.  1.3.3. Use of sin and sqrt functions with vector arguments. |
| 4th | 1st | 1.4. Plotting:  1.4.1. Two dimensional Plots and sub plots |
| 2nd | 1.4.2. Label the plot and printing. |
| 5th | 1st | 1.5. Write and execute a file to plot a circle, impulse, step, ramp, sineand cosine functions. . |
| 2nd | 1.5. Write and execute a file to plot a circle, impulse, step, ramp, sineand cosine functions. (Contd..) |
| 6th | 1st | 2. **Introduction to SIMULINK:**  2.1. Use of Commonly used blocks, Math operation block and Displayblock from SIMULINK library. |
| 2nd | 2.1. Use of Commonly used blocks, Math operation block and Displayblock from SIMULINK library.(Contd..) |
| 7th | 1st | 2.1. Use of Commonly used blocks, Math operation block and Displayblock from SIMULINK library.(Contd..) |
| 2nd | 2.1. Use of Commonly used blocks, Math operation block and Displayblock from SIMULINK library.(Contd..) |
| 8th | 1st | 2.2. Use of logical and relational operator block. |
| 2nd | 2.2. Use of logical and relational operator block.(Contd..) |
| 9th | 1st | 2.2. Use of logical and relational operator block.(Contd..) |
| 2nd | 2.2. Use of logical and relational operator block.(Contd..) |
| 10th | 1st | 2.3. Use of Sim-Power system block to use Electrical sources, elements  and Power electronics devices |
| 2nd | 2.3. Use of Sim-Power system block to use Electrical sources, elements  and Power electronics devices. (Contd..) |
| 11th | 1st | 2.3. Use of Sim-Power system block to use Electrical sources, elements  and Power electronics devices. (Contd..) |
| 2nd | 2.4. SIMULATION:  2.4.1. Verification of Network theorems. (any two) |
| 12th | 1st | 2.4.1. Verification of Network theorems. (any two) (Contd..) |
| 2nd | 2.4.2. Simulation of a half wave uncontrolled rectifier. |
| 13th | 1st | 2.4.2. Simulation of a half wave uncontrolled rectifier.(Contd..) |
| 2nd | 2.4.3. Simulation of 1-phase full bridge controlled rectifier. |
| 14th | 1st | 2.4.3. Simulation of 1-phase full bridge controlled rectifier.(Contd..) |
| 2nd | 2.4.4. Simulation of step-down chopper. |
| 15th | 1st | Revision |
| 2nd | Revision |