**Lesson Plan (Tentative)**

**Subject**: Basic Electrical and Electronics Engineering. **Subject Code**: 19EEE131

**Class**: I B.Tech. Computer Science Engineering (CSE) **Semester**: **II**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **SI. No.** | **Course Content** | **No of hours** | **Date**  **CS1 to CS6** | **Date**  **CS7**  **to CS13** |
| **Unit IV : Semiconductor devices** | | **10** | 10/2/20 | 29/11/19 |
| 1 | p-n Junction diode **-** Basic operating principle | 2 |  |  |
| 2 | current-voltage characteristics | 1 |  |  |
| 3 | rectifier circuits (half-wave, full-wave, rectifier with filter capacitor) | 2 |  |  |
| 4 | Zener diode as Voltage Regulator | 1 |  |  |
| 5 | Metal oxide semiconductor field effect transistor (MOSFET): Operation of NMOS and PMOS FETs | 2 |  |  |
| 6 | MOSFET as an amplifier and switch. | 2 |  |  |
| **Unit V : Operational Amplifiers:** | | **10** |  |  |
| 7 | The Ideal Op-amp | 1 |  |  |
| 8 | The Inverting Configuration | 1 |  |  |
| 9 | The closed loop gain, Effect of Finite open-loop gain, | 2 |  |  |
| 10 | The Non inverting Configuration, The closed loop gain | 1 |  |  |
| 11 | Characteristics of Non Inverting Configuration | 1 |  |  |
| 12 | Effect of finite open loop gain | 1 |  |  |
| 13 | The voltage follower | 1 |  |  |
| 14 | Difference amplifiers | 1 |  |  |
| 15 | A Single Op-amp difference amplifier. | 1 |  |  |
| **Unit I: Basic laws and Theorems:** | | **15** |  |  |
| 16 | Ohms law | 1 |  |  |
| 17 | Kirchoff’s laws | 1 |  |  |
| 18 | Series and parallel circuits | 1 |  |  |
| 19 | Source transformations | 1 |  |  |
| 20 | Delta-wye conversion | 1 |  |  |
| 21 | Mesh analysis | 2 |  |  |
| 22 | Nodal analysis | 2 |  |  |
| 23 | Linearity and superposition theorem | 2 |  |  |
| 24 | Thevenin’s and Norton’s theorem with simple examples | 2 |  |  |
| 25 | Maximum power transfer theorem with simple examples. | 2 | 10/04/20 | 08/02/20 |
| **Total no of hours** | | **35** |  |  |

**Total No of working days for even semester: 97**

**Starting date:** 29/11/19

**Ending date:** 10/04/20

**Lab Experiments**

**Lab**: Basic Electrical and Electronics Engineering Laboratory. **Subject Code**:19EEE131

**Class**: I B.Tech. Computer Science Engineering (CSE) **Semester**: **II**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sl. No.** | **List Of Experiments** | **No of Lab Sessions** | **Date**  **CS1 to CS6** | **Date**  **CS7**  **to CS13** |
|  | |  |  |  |
| 1 | Current Voltage Characteristics of a p-n Junction Diode | 1 | 10/2/20 | 29/11/19 |
| 2 | Diode Rectifier Circuits | 1 |  |  |
| 3 | Voltage Regulation with Zener Diodes | 1 |  |  |
| 4 | Inverting Amplifier Design with Op-amps. | 1 |  |  |
| 5 | Non inverting Amplifier Design with Op-amps. | 1 |  |  |
|  | Internal Test | 1 | 10/04/20 | 08/02/20 |
|  | **Total Lab Sessions** | **6** |  |  |

**Total No of working days for even semester: 97**

**Starting date:** 29/11/19

**Ending date:** 10/04/20