Name of the Teacher: Shilpa Gogia Class: BSc IT3rd sem(BSIT 302)

**Lesson Plan**

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| **S No** | **Period** | **Topics to be Covered** | **Academic Activity to be Organized** |
|  | **17-31 July 2017** | **Unit-IV Operational Amplifier- I**  DC Coupled Amplifier, Single and double ended differential Amplifier, differential gain. Common-mode gain CMRR, | **Oral tests** |
|  | **01-31 Aug 2017** | **Unit-IV Operational Amplifier- I**  ideal operational amplifier, Feedback in Opamp in inverting & non-inverting configuration, Buffer, Summing and Difference amplifier.  **Unit I Transistor at low frequencies**  Two port devices and Network parameters, Transistor hybrid model, h parameters, Analysis of transistor amplifier circuit using h- parameters, | **Group Discussion** |
|  | **01-30 Sept 2017** | **Unit I Transistor at low frequencies**  Emitter follower, Comparison of transistor configurations, Simplified common emitter hybrid model.  **Unit-II I.C. Fabrication Technology**  Basics of Integrated Circuit Technology, Monolithic fabrication technique, , Classification of lCs (SSI, MSI, LSI and VLSI), Different Fabrication Processes: Crystal growth, , epitaxial growth, Oxidation | **Board Test** |
|  | **01-31 Oct 2017** | **Unit-II I.C. Fabrication Technology**  Masking and Etching, Isolation diffusion, dielectric isolation, beam lead isolation, Metallization  **Unit III Monolithic Devices**  Transistors for Monolithic Circuits (NPN & PNP), Monolithic Diodes, Integrated Resistors, Integrated Capacitors and Inductors, | **Presentaion** |
|  | **01-13 Nov 2017** | JFET, MOSFET fabrication (Qualitatively), Monolithic Circuit Layout. | **Problem Discussion** |

**Topics of Assignments/ Class Tests to be given to the Students:**

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| **Assignment 1** | **Q1 What is DC coupled amplifier. Explain.**  **Q2 What is buffer? Why there is need of buffer?**  **Q3 Discuss differential amplifier and derive differential gain.**  **Q4 What is CMRR? Write its significance.** |
| **Assignment 2** | **Q1 Why we prefer approximate analysis of low frequency transistor circuits?**  **Q2 Why transistor h parameter model is preferred over other models?**  **Q3 Discuss IC fabrication process in detail.**  **Q4 Explain photolithography process.** |
| **Class Test** | **Q1 Obtain hybrid model of CE configuration.**  **Q2 Compare three transistor configuration and explain which one is preferred.**  **Q3 Discuss inverting amplifier & obtain the expression for its output voltage.** |