Lesson Plan

**B.Sc III Semester**

**Electronics Paper: I**

**Nomenclature: - Op-amp and Linear Integrated Circuits**

Teacher name: Mr. SK Bathla

October 2020

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| **Operational Amplifier- I:**Double ended differential Amplifier, differential gain, Common-mode gain, CMRR, ideal operational amplifier, Basic Concept of Feedback in Opamp, Inverting & non-inverting configuration, Summing amplifier, Difference amplifier. |

November 2020

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| **Operational Amplifier- II:**Error sources in OP-Amp: Offset Voltages, input bias Current, input offset current, scalar multiplier, Division and Multiplication, effect of error sources on inverting, non-inverting configuration, integrating circuit |

December 2020

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| differentiating circuit, 1st order active filter using op-amp: LPF, HPF, Band Pass Filter. **I.C. Fabrication Technology:**Basics of Integrated Circuit Technology, Monolithic fabrication technique, Different Fabrication Processes: Crystal growth, epitaxial growth, Oxidation, Masking and Etching, |

January2021

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| Diffusion of Impurities, Metallization, Transistors for Monolithic Circuits (NPN & PNP), Monolithic Diodes, Integrated Resistors, Classification of ICs (SSI, MSI, LSI and VLSI). **Regulated Power Supply:**Principle of voltage regulation, Zener diode shunt regulator, BJT shunt regulator and BJT series voltage regulator,  |

February 2021

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| power supply regulation using op-amp, load regulation, short circuit protection ,current regulation using op. amp., Block Diagram of three terminal IC regulator(78xx, 79xx,), Boosted power supply |