Lesson Plan

**B.Sc I Sem Electronics**

**Paper: I -Electronic Devices and Circuits-I**

Teacher name: Mr. SK Bathla

October 2020

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| **Introduction to Semiconductors:-**Intrinsic and Extrinsic semiconductors, Energy Band diagram, drift and diffusion currents in semiconductors (Basic idea only), Junction diode and its characteristics, Space charge capacitance and diffusion capacitance (Basic idea only), Zener diode, Voltage Regulation using Zener Diode (Basic Idea), Schottky diode , |

November 2020

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| shunt and series clipping circuit., clamping circuit .  **Rectifiers:** - HWR, FWR, Bridge FWR, calculation of rectifier parameters.  Filter circuits: L, C, LC (Calculation of ripple factor), Voltage multiplier Circuit. |

December 2020

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| **Bipolar Junction Transistor:-** Potential curves in unbiased and biased transistor, Transistor current components, Early effect, Static Characteristics of CB & CE configuration, active, cut off and saturation regions.  Transistor as an Amplifier, Transistor current gains (Alpha, Beta, and Gama)  **Transistor Model: -** Ebers-moll model of transistor, Hybrid-Model of transistor, Emitter follower |

January2021

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| Transistor as an Amplifier, Transistor current gains (Alpha, Beta, and Gama)  Transistor Model: - Ebers-moll model of transistor, Hybrid-Model of transistor, Emitter follower |

February 2021

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| calculation of transistor amplifier parameters using h-model, comparison of transistor amplifier configuration, millers – theorem and its dual |