

## LESSON PLAN

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| <b>Subject name:<br/>Basic Electronics</b> | <b>Faculty Name: Mrs. Niharika Sethy</b><br><b>No of Classes per week: 2</b><br><b>Commencement of classes: From 25.10.2022 to 31.01.2023</b>   |               |
| <b>Week No.</b>                            | <b>Topics to be covered</b>   | <b>Status</b> |
| W1   | <b>ELECTRONIC DEVICES</b><br>1.1 Basic concept of Electronics & its applications.<br>1.2 Basic concept of Electron Emission and its type.   |               |
| W2   | 1.3 Classification of material according to electrical conductivity (Conductor, Semiconductor & Insulator) with respect to energy band diagram only.<br>1.4 Intrinsic & Extrinsic Semiconductor.                                    |               |
| W3   | 1.5 Difference between vacuum tube & semiconductor.<br>1.6 Principle of working and use of PN junction diode, Zener diode   |               |
| W4   | Light Emitting Diode (LED), Basic concept of integrated circuits (I.C) & its uses.  |               |
| W5   | <b>ELECTRONIC CIRCUITS</b><br>2.1 Define Rectifier & its use. 2.2 Principles of working of different types of Rectifiers and their merits and demerits  |               |
| W6   | 2.3 Functions of filters and classification of filter characteristics 2.4 D.C power supply system with help of block diagrams only  |               |
| W7   | 2.5 Different types of Transistor Configuration and state output and input current gain relationship in CE, CB and CC configuration.<br>2.6 Need of biasing and different types of biasing with circuit diagram. (CE configuration) |               |

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| W8  | 2.9 Basic function of Oscillation<br>2.10 Essentials of Transistor oscillators and its classifications.  |  |
| W9  | <b>COMMUNICATION SYSTEM</b><br>3.1 Basic communication system with help of Block diagram<br>3.2 Modulation, Demodulation.  |  |
| W10 | 3.3 Need of Modulation<br>3.4 Different types of Modulation (AM, FM & PM)<br>3.5 Amplitude Modulation & Frequency Modulation (Signal, Carrier Wave & Modulated Wave) (No Mathematical Derivation.) |  |
| W11 | <b>TRANSDUCERS AND MEASURING INSTRUMENTS</b><br>4.1 Concept of Transducer and Primary sensor and differences.<br>4.2 Different type of Transducers & concept of active and passive transducer      |  |
| W12 | 4.3 Working principle of photo emissive, photoconductive, photovoltaic transducer and its application.   |  |
| W13 | 4.4 Multimeter, types and applications<br>4.5 Analog and digital multimeter and their differences  |  |
| W14 | 4.6 Working principle of Multiameter with basic block diagram.   |  |
| W15 | 4.7 CRO , Block diagram of CRO and applications of CRO   |  |

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