

LESSON PLAN

“PVC” NSSK GP Bilaspur		Department: Electrical Engineering			Subject : EDC-II	
		Course : Diploma			Duration: 3 Yrs.	
SYLLABUS COVERAGE		Total Period: 56			Theory : 56	
Sr. No.	Period Nos	Topic	Details	Instruction Reference	Additional Study Recommended	Remarks
1	10(1-12)	Sinusoidal Oscillators	Working Principle of Oscillator, Use of positive feedback in amplifier circuit; Barkhausen criterion, Difference between Oscillator & Electrical Generator. Different Types of Oscillator circuits: Tuned collector, Hartley, Colpitts, Phase shift, Wien Bridge, and Crystal oscillator- Their working principle, frequency range and applications.			
2	7(11-17)	Tuned Voltage Amplifier	Series and Parallel Resonant Circuits, Comparison between Series and Parallel resonant Circuits, Single & Double Tuned Voltage Amplifier Circuits and their frequency response.			
3	7(18-24)	Wave Shaping Circuits	- Integrating and differentiating circuits: Their working and applications - Diode Clipping circuits, biased Clipping circuits - Clamping circuits.			
4	8(25-32)	Multivibrator Circuits	Working principle of Transistor as S witch - Concept of Multi-vibrator: Astable, Monostable, and Bistable - Block diagram of IC555 and its working and applications - Working of IC555 as astable and monostable multivibrator - Applications of Multivibrator Circuits			

5	9(32-40)	Operational Amplifiers	<p>Characteristics of an ideal operational amplifier and its block diagram, Pin Identification of IC741</p> <ul style="list-style-type: none"> - Definitions: Differential voltage gain, CMRR, slew rate, input offset current, input offset voltage, total output offset voltage. - Open loop configurations: Differential, Inverting & Non Inverting modes, limitations of open loop configuration. - Closed loop configuration: As an Inverting & Non-inverting amplifier, Schmitt trigger circuit, Comparator, Differentiator and Integrator 			
6	7(41-47)	Optoelectronic Devices	<p>Working principle of Photo-resistor, photo diode, photo transistor and their applications, Need for Opto-isolation in electronic circuit, Working of optocoupler circuit.</p>			
7	8(48-56)	Regulated Power Supplies	<ul style="list-style-type: none"> - Working of DC regulated power Supply - Line and load side regulation - Regulator ICs (78XX, 79XX) - Switching Mode Power Supply (SMPS)- Working Principle, advantages & applications. 			

Approved	HOD Sign.
Date: 14/03/2022	