SUBJECT- Th2. ANALOG ELECTRONICS AND OP-AMP				
MONTH	MODULE/UNIT	COURSE TO BE COVERED	TOTAL NO. OF CLASS	REMARK
APRIL	**UNIT-1**	**1 P-N JUNCTION DIODE**	**06**	
		1. 1 P-N Junction Diode 1. 2 Working of Diode	01	
		1. 3 V-1 characteristic of PN junction Diode. V-1 characteristic of PN junction Diode	01	
		1. 4 DC load line 1. 5 Important terms such as Ideal Diode, Knee voltage	01	
		1. 6 Junctions break down. 1.6.1 Zener breakdown 1.6.2 Avalanche breakdown	01	
		1. 7 P-N Diode clipping Circuit.	01	
		1.8 P-N Diode clamping Circuit	01	
APRIL	**UNIT-2**	**2.SPECIALSEMICONDUCTOR DEVICES**	**05**	
		2.1Thermistors, Sensors & barretters	02	
		2. 2 Zener Diode	01	
		2. 3 Tunnel Diode	01	
		2. 4 PIN Diode	01	
	UNIT-3	**3.RECTIFIER CIRCUITS & FILTERS**	**07**	
		3.1 Classification of rectifiers	01	
		3.2 Analysis of half wave, full wave centre tapped and Bridge rectifiers	01	
		3.2.1DC output current and voltage	01	
		3.2.2 RMS output current and voltage 3.2.3 Rectifier efficiency	01	
		3.2.4Ripple factor 3.2.5Regulation	01	

		3.2.6 Transformer utilization factor 3.2.7 Peak inverse voltage	01	
		3.3 Filters: 3.3.1 Shunt capacitor filter 3.3.2 Choke input filter 3.3.3 π filter	01	
MAY	**UNIT-4**	**4. TRANSISTORS**	**07**	
		4.1 Principle of Bipolar junction transistor	01	
		4.2 Different modes of operation of transistor	01	
		4.3 Current components in a transistor	01	
		4.4 Transistor as an amplifier	01	
		4.5 Transistor circuit configuration & its characteristics 4.5.1 CB Configuration 4.5.2 CE Configuration 4.5.3 CC Configuration	03	
MAY	**UNIT-5**	**5. TRANSISTOR CIRCUITS**	**07**	
		5.1 Transistor biasing	01	
		5.2 Stabilization	01	
		5.3 Stability factor	01	
		5.4 Different method of Transistors Biasing 5.4.1 Base resistor method 5.4.2 Collector to base bias 5.4.3 Self bias or voltage divider method	04	
JUNE	**UNIT-6**	**6. TRANSISTOR AMPLIFIERS & OSCILLATORS**	**13**	
		6.1 Practical circuit of transistor amplifier 6.2 DC load line and DC equivalent circuit	01	
		6.3 AC load line and AC equivalent circuit 6.4 Calculation of gain	01	
		6.5 Phase reversal 6.6 H-parameters of transistors	01	

		6.7 Simplified H-parameters of transistors	01	
		6.8 Generalised approximate model 6.9 Analysis of CB, CE, CC amplifier using generalised approximate model	01	
		6.9 Analysis of CB, CE, CC amplifier using generalised approximate model	01	
		6.10Multi stage transistor amplifier 6.10.1R.C. coupled amplifier 6.10.2Transformer coupled amplifier	02	
		6.11Feed back in amplifier 6.11.1General theory of feed back 6.11.2Negative feedback circuit 6.11.3Advantage of negative feed back	01	
		6.12 Power amplifier and its classification 6.12.1 Difference between voltage amplifier and power amplifier	01	
		6.12.2 Transformer coupled class A power amplifier 6.12.3 Class A push - pull amplifier 6.12.4Class B push - pull amplifier	01	
		6.13 Oscillators 6.13.1Types of oscillators 6.13.2 Essentials of transistor oscillator 6.13.3 Principle of operation of tuned collector, Hartley, colpitt, phase shift, wein• bridge oscillator (no mathematical derivations)	02	
JUNE	**UNIT-7**	**7.FIELDEFFECT TRANSISTOR**	**06**	
		7.1 Classification of FET	01	
		7.2 Advantages of FET over BJT 7.3 Principle of operation of BJT	02	
		7.4 FET parameters (no mathematical derivation) 7.4.1DC drain resistance 7.4.2AC drain resistance 7.4.3Trans-conductance	02	
		7.5 Biasing of FET	01	

JUNE	**UNIT-8**	**8.PERATIONAL AMPLIFIERS**	**09Z**	
		8.1 General circuit simple of OP-AMP and IC - CA - 741 OP AMP	01	
		8.2 Operational amplifier stages 8.3Equivalent circuit of operational amplifier	01	
		8.4 Open loop OP-AMP configuration	01	
		8.5 OPAMP with fed back 8.6 Inverting OP-AMP	01	
		8.7 Non inverting OP-AMP	01	
		8.8 Voltage follower & buffer	01	
		8.9 Differential amplifier 8.9.1 Adder or summing amplifier 8.9.2 Sub tractor 8.9.3 Integrator 8.9.4 Differentiator 8.9.5 Comparator	03	