STATE BOARD OF TECHNICAL EDUCATION & TRAINING, TAMILNADU.

DIPLOMA IN COMPUTER ENGINEERING
M- SCHEME

(to be implemented to the student Admitted from the Year 2015-2016 on wards)

Course Name   : Diploma in Computer Engineering.

Subject Code   : 35234

Semester   : III

Subject title   : Electrical and Electronics Engineering Practical

TEACHING & SCHEME OF EXAMINATION:

No. of weeks per Semester 15 Weeks

Subject	Instructions		Examination			
Electrical and Electronics Engineering Practical	Hours / Week	Hours / Semester	Marks			Duration
	4 Hrs	60 Hrs	Internal Assessment	Board Examination	Total	
			25	75	100	3 Hrs

OBJECTIVES

On completion of the following practical contents the students must be able to

- Verify Power supply of SMPS

- Find the efficiency and voltage regulation of a single phase transformer

- Study the characteristics of PN junction diode and Zener Diode

- Function of Rectifier circuit

- Test the performance of Light devices

- Know about the function of a Transistor

- How to construct different logic functions using universal gates

- Realize the combinational circuits and sequential circuits

LAB EXERCISES

1	A	Checking of power supply in SMPS
	B	To determine Efficiency and Voltage Regulation of single phase transformer using direct loading method
2	A	Construct the circuit and draw the forward characteristics of PN junction Diode and find input resistance.
	B	Construct the circuit and draw the reverse characteristics of Zener Diode and find breakdown voltage.
3		Construct the circuit and draw the graph for different stages of Bridge rectifier with filter using CRO
4	A	Construct the circuit and draw the characteristics of LDR
	B	Construct the circuit and draw the VI characteristics of LED
5	A	Construct CE configuration circuit and draw the input characteristics and also find input resistance
	B	Construct CE configuration circuit and draw the output characteristics and also find output resistance .
6	A	Verify the truth tables of NAND,AND,NOR,OR,NOT,XOR using IC's
	B	Realization of basic gates using either NAND or NOR gate.
7		Construct and verify Half adder and Half Subtractor
8		Construct and verify the truth table of Full adder
9		Construct and verify the truth table of Full subtractor
10		Verify the truth tables of RS, D, T and JKFF
11		Construct and test the parity generator and checker function using IC 74180
12		Construct and test encoder and decoder circuit(IC 74138)
13		Construct and test the function of Multiplexer and De-ultiplexer(IC 74151)
14		Construct and test the 4 bit Ripple counter (IC7493)
15		Construct and test decade counter (IC 7490)

SCHEME OF VALUATION	
Writing any one Experiment (CIRCUIT DAIGRAM,TABULAR COLUMN,TRUTHTABLE/EQUATION/FORMULA)	30 Marks
Construction	30 Marks
Result	10 Marks
VIVA – VOCE	05 Marks
Total	75 Marks

EQUIPMENTS/COMPONENTS REQUIRED

EQUIPMENTS

S.No	Name of the Equipments	Range	Required Nos
1	Ammeter	(0-50) Ma	6
2	Voltmeter	(0-20) V,(0-1v)	6
3	Power supply	0-30V	6
4	Digital Trainer Kit		6
5	Bread Board		6
6	Fixed dual power Supply	0-15 V	2
7	Signal generator	1 MHz	2
8	CRO Dual Trace	30 MHz	6
9	Single Phase Transformer		

COMPONENTS

S.No	Name of the components	
1	Resistors	1150Ω, 1KΩ, 2.2KΩ,10KΩ,2 20Ω
2	Capacitor	10µF, 4.7µF
3	PN Diode	IN4007
4	Zener Diode	Z11.1
5	Transistor	SL100,CL100
6	IC7400, IC7402, IC7404, IC7408, IC7432, IC7486	
7	Ic 74180,IC 74153,IC 7476,IC 7474	
8	IC 7490,IC 7493,IC 7495	