

YEAR/ SEM : II/II B.TECH (R-16)
LAB CODE/LAB NAME : EE406ES CONTROL SYSTEMS & SIMULATION LAB
INCHARGE (TEACHER/LAB STAFF) : A.SREELATHA REDDY / K NARESH

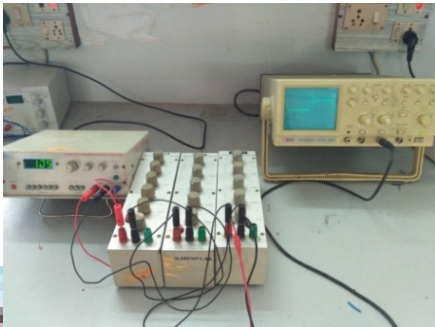
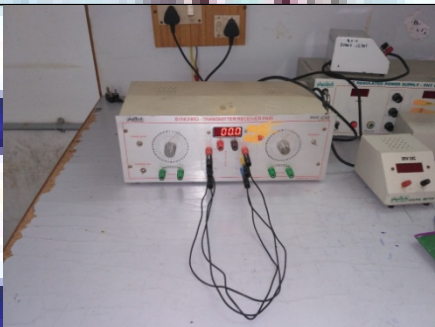

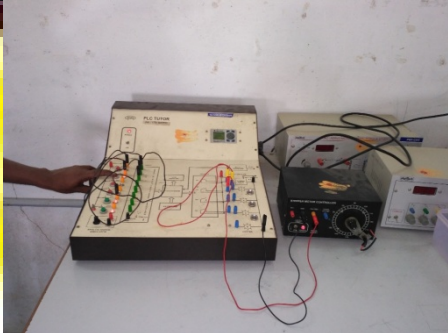

LIST OF EXPERIMENTS

CYCLE – I

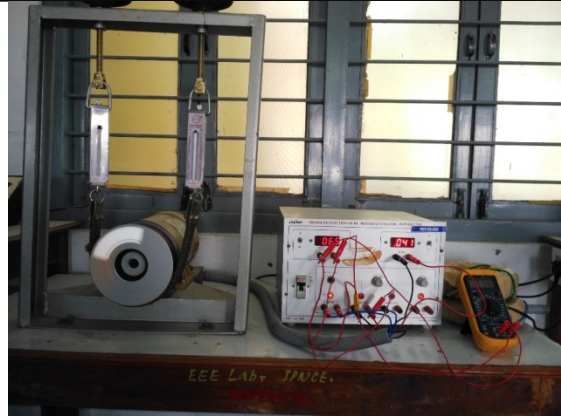
1. TIME RESPONSE OF SECOND ORDER SYSTEM
2. CHARACTERISTICS OF SYNCHROS
3. PROGRAMMABLE LOGIC CONTROLLER – STUDY AND VERIFICATION OF TRUTH TABLES OF LOGIC GATES, SIMPLE BOOLEAN EXPRESSION AND APPLICATION OF SPEED CONTROL OF MOTOR
4. EFFECT OF FEEDBACK ON DC SERVO MOTOR
5. TRANSFER FUNCTION OF A DC MOTOR
6. TRANSFER FUNCTION OF A DC GENERATOR
7. TEMPERATURE CONTROLLER USING PID
8. CHARACTERISTICS OF AC SERVO MOTOR

CYCLE – II

9. EFFECT OF P,PD,PI,PID CONTROLLER ON A SECOND ORDER SYSTEMS
10. LAG AND LEAD COMPENSATION - MAGNITUDE AND PHASE PLOT
11. a) SIMULATION OF P,PI,PID CONTROLLER,
b) LINEAR SYSTEM ANALYSIS (TIME DOMAIN ANALYSIS) USING SUITABLE SOFTWARE
12. STABILITY ANALYSIS (BODE ROOT LOCUS, NYQUIST) OF LINEAR TIME INVARIANT SYSTEM USING SUITABLE SOFTWARE
13. STATE SPACE MODEL FOR CLASSICAL TRANSFER FUNCTION USING SCILAB VERIFICATION
14. DESIGN OF LEAD-LAG COMPENSATOR FOR THE GIVEN SYSTEM AND WITH SPECIFICATION USING SUITABLE SOFTWARE
15. LTSPICE OF SIMULATION OF OP – AMP BASED INTEGRATOR AND DIFFERENTIATOR CIRCUITS
16. LINEAR SYSTEM ANALYSIS (TIME DOMAIN ANALYSIS, ERROR ANALYSIS) USING SCILAB
17. STABILITY ANALYSIS (BODE PLOT, ROOT LOCUS, NYQUIST) OF LINEAR TIME INVARIANT SYSTEM USING SCILAB

S.No	Equipment	Quantity	Specifications	Image
1	Time response system a)DRB b)FUNCTION GENERATOR c)CRO(0-20MHZ)	06 02 02	0-100MΩ 0-1MHZ 0-20MHZ	
2	SYNCHROUS	1	KIT	
3	 PLC	1	KIT	
4	DC SERVO MOTOR	1	DC SERVO MOTOR	

5	TRASFOR FUNCTION	1	DC MOTOR
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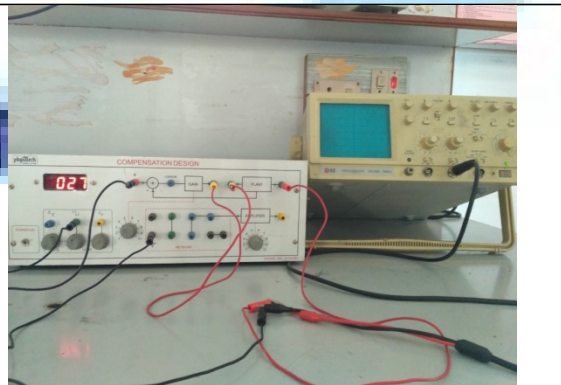
6	TRANSEER FUNCTION	1	DC GENERATO R
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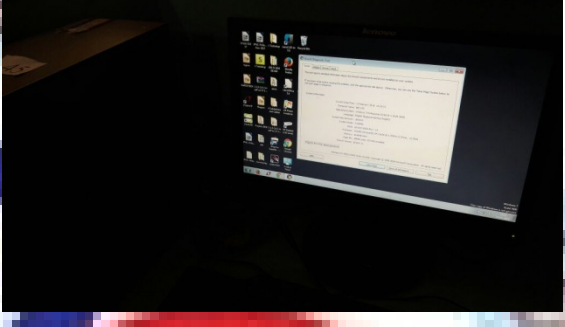
7	SERVO MOTOR	1	AC MOTOR
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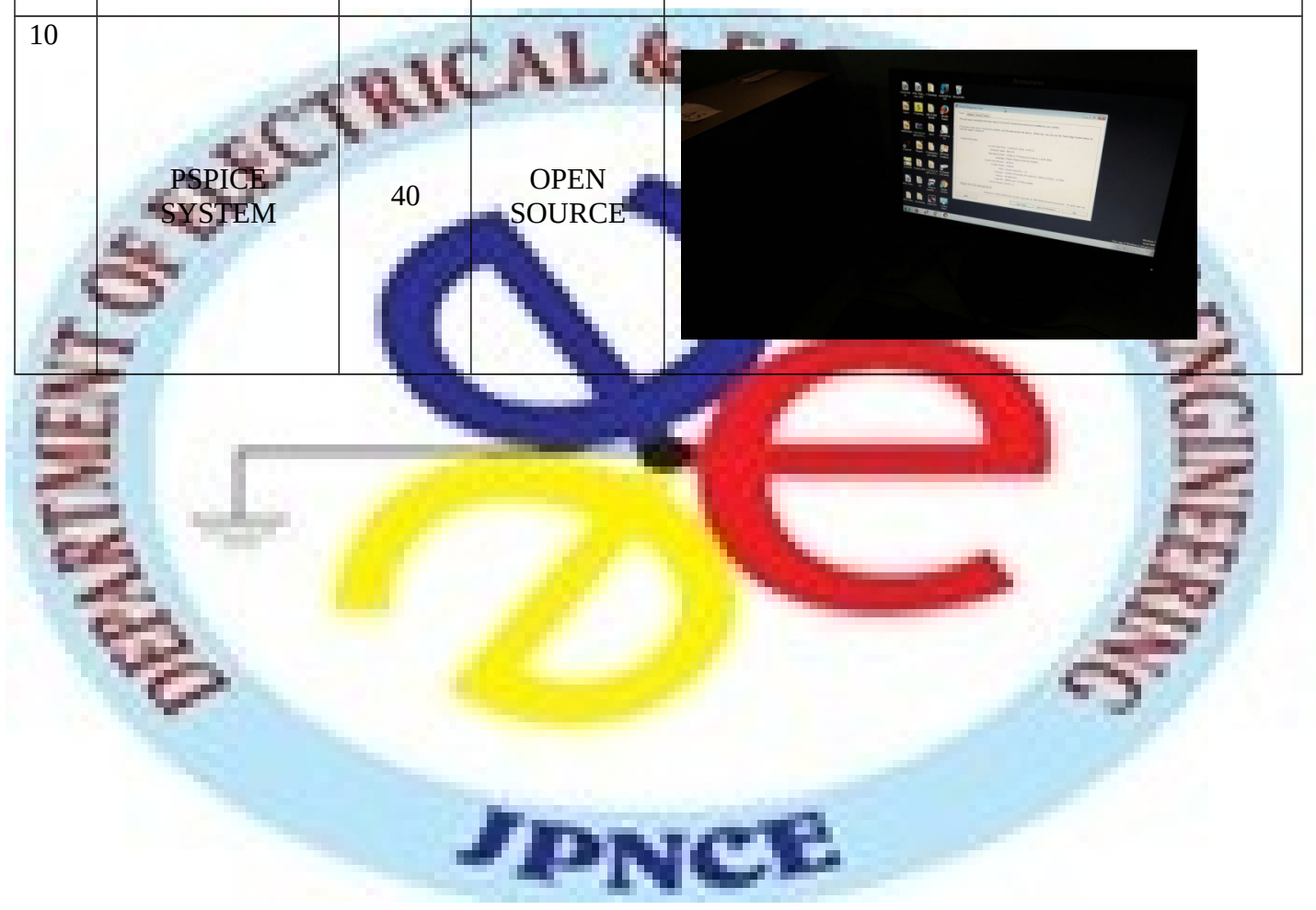


8	LAG AND LEAD COMPENSATIO N	1	MAGNITUD E PHASE PLOT
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9	TEMPERATURE CONTROLLER	1	KIT	
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10	PSPICE SYSTEM	40	OPEN SOURCE	
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REF: JPNCE/EEE/02

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DHARMAPUR, MAHBUBNAGAR
DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING
CONTROL SYSTEMS & SIMULATION LAB**

B.TECH III- II SEM (R-15) – EEE

LIST OF EXPERIMENTS

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CYCLE – II

7. CHARACTERISTIC OF MAGNETIC AMPLIFIER
8. TRANSFER FUNCTION OF A DC GENERATOR
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