Subject :- CTPS

CMR INSTITUTE

OF TECHNOLOGY

Session wise – Course Plan

Department of Electrical And Electronics Engg

SEMESTER   : VII   NAME OF THE FACULTY   : Ms. Sanitha Michail C

 BRANCH   : EEE   DATE OF COMMENCEMENT   : 28.08.2016

 SUBJECT   : CTPS   DATE OF CLOSING   :   21.11.2016

 SUBJECT CODE : 10EE71   CLASS STRENGTH   : 120

 NO OF HRS/WK   : 6   TOTAL HOURS   : 62

Sessi on No	Chapter no (No of hrs planed for the chapter)	DATE	Topics planned for the session	Teaching Aids	Assignme nts/ Tests planned for the chapter	Topics covere d As per plan
1	1/6	1/8/2016	Introduction, Elementary graph theory –oriented graph	Board & chalk	Prerequisi te Assignme nt	
2	1/6	2/8/2016	tree, co-tree, basic cut-sets, basic loops, Incidence matrices –	,,		

			Element-node, Bus incidence			
3	1/6	3/8/2016	Tree-branch path, Basic cut-set, Augmented cut-set, Basic loop and Augmented loop	,,		
4	1/6	5/8/2016	Primitive network – impedance form, admittance form	,,		
5	1/6	6/8/2016	Formation of network matrices by singular transformations	,,	Assignment- I	
6	1/6	8/8/2016	Branch impedence matrices & loop incidence matrices	,,		
7	1/6	9/8/2016	Problems	,,		
8	2/6	10/8/2016	Algorithm for formation of bus impedence matrix	Board, chalk, duster		
9	2/6	11/8/2016	Modification of bus impedence matrix for changes in the network	,,		
10	2/6	12/8/2016	Formation of YBUS – by method of inspection	,,		
11	2/6	16/8/2016	Formation of YBUS – by method of singular transformation (YBUS = ATyA	,,		
12	2/6	17/8/2016	Formation of Bus Impedance Matrix by step by step building algorithm (without mutual coupling elements).	,,	Assignment -II	
13	2/6	18/8/2016	Transformer off nominal tap setting	,,		
14	2/6	19/8/2016	Problems	,,		
15	2/6	20/8/2016	Problems			
16	3 &4 /14	22/8/2016	Power flow equations			

17	3 &4 /14	23/8/2016	Classification of buses			
18	3 &4 /14	24/8/2016	Operating constraints	,,		
19	3 &4 /14	25/8/2016	Data for load flow	,,	Assignme nt –III	
20	3 &4 /14	26/8/2016	Gauss Seidal method	,,		
21	3 &4 /14	27/8/2016	Algorithm & flow chart for PQ and PV buses	,,		
22	3 &4 /14	30/8/2016	Acceleration for convergence	,,		
23	3 &4 /14		Problems on GS method			
24	3 &4 /14	1/9/2016	Problems on GS method	Board, chalk, duster		
25	3 &4 /14	9/9/2016	Algorithm & flow chart for NR method in polar coordinates	,,		
26	3 &4 /14	10/9/2016	Problems on NR method	,,	Assignmnt –IV	
27	3 &4 /14	13/9/2016	Problems on NR method	,,		
28	3 &4 /14	14/9/2016	Algorithm for fast decoupled load flow method	,,		
29	3 &4 /14	16/9/2016	Comparison of load flow method	,,		
30	3 &4 /14	19/9/2016	Problems on fast decoupled method	,,		
31	3 &4 /14	21/9/2016	Problems on fast decoupled method	,,		
32	5 & 6/12	23/9/2016	Economic load dispatch - Introduction	,,		

33	5 & 6/12	24/9/2016	Economic generation scheduling neglecting losses and generator limits	Board, chalk, duster		
34	5 & 6/12	26/9/2016	Economic generation scheduling including generator limits	,,		
35	5 & 6/12	27/9/2016	Problems on Economic generation scheduling	,,	Assignment -V	
36	5 & 6/12	28/9/2016	Problems on Economic generation scheduling	,,		
37	5 & 6/12	29/9/2016	Economic Dispatch including transmission losses	,,		
38	5 & 6/12	3/10/2016	Problems on transmission losses	,,		
39	5 & 6/12	4/10/2016	Problems on transmission losses	,,		
40	5 & 6/12	5/10/2016	penalty factor	,,		
41	5 & 6/12	6/10/2016	Problems on penalty factor	,,		
42	5 & 6/12	7/10/2016	Problems on penalty factor	,,		
43	5 & 6/12	8/10/2016	Economic load dispatch - Introduction	,,		
44	5 & 6/12	13/10/2016	Economic generation scheduling neglecting losses and generator limits	,,		
45	5 & 6/12	17/10/2016	Economic generation scheduling including generator limits	,,	Assignment -VI	
46	7 & 8 /14	18/10/2016	Numerical solution of Swing Equation	,,		
47	7 & 8 /14	19/10/2016	Equal area criteria	,,		
48	7 & 8 /14	21/10/2016	Equal area criteria	,,	Assignment -VII	

49	7 & 8 /14	22/10/2016	Factors affecting stability	Board, chalk, duster		
50	7 & 8 /14	27/10/2016	Point-by-point method	,,		
51	7 & 8 /14	27/10/2016	Problem on point by point method	,,		
52	7 & 8 /14	28/10/2016	Problem on point by point method	,,		
53	7 & 8 /14	28/10/2016	Modified Euler's method	PPT		
54	7 & 8 /14	2/11/2016	Modified Euler's method	,,		
55	7 & 8 /14	3/11/2016	Runge kutta method	Board/Chalk	Assignment -VIII	
56	7 & 8 /14	4/11/2016	Runge kutta method	,,		
57	7 & 8 /14	5/11/2016	Milne's predictor corrector method,	PPT/Board/Chalk,,		
58	7 & 8 /14	5/11/2016	Milne's predictor corrector method,	,,		
59	7 & 8 /14	7/11/2016	Representation of power systems for tranientstudies	,,		
60	7 & 8 /14	7/11/2016	Network performance equations	,,		
61	7 & 8 /14	8/11/2016	Solution techniques with flow charts			
62	7 & 8 /14	8/11/2016	Problems			

Signature of faculty   Signature of HOD   Signature of Principal

Subject :- EPU

CMR INSTITUTE

OF TECHNOLOGY

Session wise – Course Plan

Department of Electrical And Electronics Engg

SEMESTER   : VII   NAME OF THE FACULTY   : Ms. Parvathy Thampi M S

BRANCH   : EEE   DATE OF COMMENCEMENT   : 28.08.2016

SUBJECT   : EPU   DATE OF CLOSING   : 21.11.2016

SUBJECT CODE : 10EE72   CLASS STRENGTH   : 121

NO OF HRS/WK   : 5   TOTAL HOURS   : 61

Session No	Chapter no (No of hrs planed for the chapter)	DATE	Topics planned for the session	Teaching Aids	Assignments/ Tests planned for the chapter	Topics covered As per plan
1	**1/1**	1/8/2016			Assignments(1) Pre -requisites	
2	**2/1**	2/8/2016	Advantages and methods of Electric Heating			
3	**3/1**	3/8/2016	Resistance Ovens		Assignment- 2	
4	**4/1**	5/8/2016	Induction Heating			

5	5/1	6/8/2016	Dielectric Heating			
6	6/1	8/8/2016	Arc Furnace			
7	7/1	9/8/2016	Heating of Building			
8	8/1	10/8/2016	Electric Welding			
9	9/1	11/8/2016	Resistance and Arc Welding			
10	10/1	12/8/2016	Control Devices		Assignment -3	
11	11/1	16/8/2016	Welding Equipments			
12	12/1	17/8/2016	Problems			
13	1 / 2	18/8/2016	Problems			
14	2/2	19/8/2016	Fundamental Principles			
15	3/2	20/8/2016	Extraction and Refining of Metals		Assignment -4	
16	4/2	22/8/2016	Electroplating			
17	5/2	23/8/2016	Factors affecting electro Deposition processes			
18	6/2	24/8/2016	Power supply for Electrolytic process			
19	1/3,4	25/8/2016	Problems			
20	2/3,4	26/8/2016	Laws of Illumination		Assignment -5	
21	3/3,4	27/8/2016	Distribution and Control Of Lighting			
22	4/3,4	30/8/2016	Lighting Calculations			
23	5/3,4		Factory Lighting			
24	6/3,4	1/9/2016	Flood Lighting			

25	**7/3,4**	9/9/2016	Street Lighting, Different types of lamps			
26	**8/3,4**	10/9/2016	Incandescent Lamp and its Working			
27	**9/3,4**	13/9/2016	Fluorescent lamp and its working			
28	**10/3,4**	14/9/2016	Vapor and CFL and LED lamps and their working			
29	**11/3,4**	16/9/2016	Comparison among different lamps, Glare and its remedy			
30	**1 /5,6,7**	19/9/2016	Problems		Assignment -6	
31	**2/5,6,7**	21/9/2016	Problems			
32	**3/5,6,7**	23/9/2016	Introduction, Requirements of an ideal traction			
33	**4/5,6,7**	24/9/2016	System of Traction			
34	**5/5,6,7**	26/9/2016	Speed Time curve			
35	**6/5,6,7**	27/9/2016	Tractive Effort / coefficient of Adhesion			
36	**7/5,6,7**	28/9/2016	Selection of Traction Motors			
37	**8/5,6,7**	29/9/2016	Methods of Speed Control		Assignment-7	
38	**9/5,6,7**	3/10/2016	Energy Saving by Series Parallel control			
39	**10/5,6,7**	4/10/2016	AC Traction Equipment			
40	**11/5,6,7**	5/10/2016	AC Series Motor			
41	**12/5,6,7**	6/10/2016	Characteristics			
42	**13/5,6,7**	7/10/2016	Regenerative Breaking			
43	**14/5,6,7**	8/10/2016	Linear Induction Motor			
44	**15/5,6,7**	13/10/2016	LIM and its Use			

45	**16/5,6,7**	17/10/2016	AC Traction			
46	**17/5,6,7**	18/10/2016	Diesel Electric Equipment		Assignment - 8,8A	
47	**18/5,6,7**	19/10/2016	Train Lighting Systems			
48	**19/5,6,7**	21/10/2016	Specific energy			
49	**20/5,6,7**	22/10/2016	Factors effecting energy consumption			
50	**21/5,6,7**	27/10/2016	Problems			
51	**22/5,6,7**	27/10/2016	Problems			
52	**23/5,6,7**	28/10/2016	Problems		Assignment-9	
53	**24/5,6,7**	28/10/2016	Problems			
54	**25/5,6,7**	2/11/2016	Problems			
55	**1/8**	3/11/2016	Configuration and Performance of electric vehicles			
56	**2/8**	4/11/2016	Traction motor characteristics			
57	**3/8**	5/11/2016	Tractive effort			
58	**4/8**	5/11/2016	Tractive effort			
59	**5/8**	7/11/2016	Transmission requirement			
60	**6/8**	7/11/2016	Transmission requirement			
61	**7/8**	8/11/2016	Vehicle performance and energy consumption			

Signature of faculty   Signature of HOD   Signature of Principal

Subject :- HV

CMR INSTITUTE

OF TECHNOLOGY

Session wise – Course Plan

Department of Electrical & Electronics Engineering

SEMESTER   :VII   NAME OF THE FACULTY   : Mr. Anand Bhat B

 BRANCH   :EEE   DATE OF COMMENCEMENT   : 28-07-16

 SUBJECT   :HVE   DATE OF CLOSING   : 21-11-16

 SUBJECT CODE : 10EE73   CLASS STRENGTH   : 61+62

 NO OF HRS/WK : 5   TOTAL HRS   : 45

Session No	Chapter no./No. of hours planned	Date	Topics planned for the session **(UNIT 1 was handled by other Faculty)**	Teaching Aids	Assignments/ Tests planned for the chapter	Topics Covered as per plan
1	1/10	01-08-2016	Introduction to HV technology	Chalk & Talk		

2	1/10	02-08-2016	Introduction to HV technology	"		
3	1/10	02-08-2016	Need for generating High Voltages in Laboratory	"		
4	1/10	03-08-2016	Need for generating High Voltages in Laboratory	PPT		
5	1/10	04-08-2016	Industrial applications of High Voltage	Chalk & Talk		
6	1/10	08-08-2016	Industrial applications of High Voltage	PPT		
7	1/10	09-08-2016	Electrostatic Precipitation	"		
8	1/10	09-08-2016	Electrostatic Separation	"		
9	1/10	10-08-2016	Electrostatic Painting	"		
10	1/10	11-08-2016	Electrostatic Printing	"		
11	3&4/14	17-08-2016	UNIT 2&3:Overview of High Voltage Engineering, Breakdown Phenomenon Basics	Chalk & Talk	Assignment 1	
12	3&4/14	18-08-2016	Gas, Liquid, Solid and Liquid Dielectrics: Properties, Breakdown Strength, Gas as an Insulating Media	"		
13	3&4/14	18-08-2016	Ionization Process, Ionization by collision	"		
14	3&4/14	19-08-2016	Ionization- Photoionization; Secondary Ionization process due to - positive ions	"		

15	3&4/14	20-08-2016	Secondary Ionization process due to - photons, metastable and neutral Atoms. Electron attachment Process	"		
16	3&4/14	24-08-2016	Electron Attachment Process, Townsend's current growth equation	"		
17	3&4/14	25-08-2016	Townsend's criterion for breakdown: Derivation and VTU exam Problems	"	Assignment 2	
18	3&4/14	25-08-2016	Vtu Exam Problems, 3 conditions, Breakdown in Electronegative Gas	"		
19	3&4/14	26-08-2016	Time lags for breakdown, Limitations of Townsend's Theory	"		
20	3&4/14	27-08-2016	Streamer Theory	"		
21	3&4/14	31-08-2016	Paschen law: Derivation and Problems.	"		
22	3&4/14	01-09-2016	Breakdown in non uniform fields. Corona discharges.	"		
23	3&4/14	09-09-2016	Breakdown in solid dielectrics: Intrinsic Breakdown, avalanche breakdown, thermal breakdown, and electro mechanic breakdown.	"		
24	3&4/14	14-09-2016	Breakdown of liquid dielectrics: Suspended particle theory, electronic Breakdown, cavity breakdown (bubble's theory), electro	PPT	Assignment 3	

			convection breakdown.			
25	5/7	15-09-2016	UNIT 5: Introduction to standard lightning and switching impulse voltages	Chalk & Talk		
26	5/7	15-09-2016	Analysis of single stage impulse generator-expression for Output impulse voltage.	"		
27	5/7	16-09-2016	Multistage impulse generator working of Marx impulse	"		
28	5/7	17-09-2016	Rating of impulse generator. Components of multistage impulse generator.	"		
29	5/7	21-09-2016	Triggering of impulse generator by three electrode gap arrangement.	"	Assignment 4	
30	5/7	22-09-2016	Trigatron gap and oscillograph time sweep circuits.	"		
31	5/7	22-09-2016	Generation of switching impulse voltage. Generation of high impulse current.	PPT		
32	6/9	23-09-2016	UNIT 6: Electrostatic voltmeter-principle,	Chalk & Talk		
33	6/9	24-09-2016	Construction and limitation.	"		
34	6/9	28-09-2016	Chubb and Fortescue method for HV AC measurement.	"		
35	6/9	29-09-2016	Generating voltmeter- Principle, Construction.	"	Assignment 5	

36	6/9	29-09-2016	Series resistance micro ammeter for HV DC measurements	"		
37	6/9	03-10-2016	Standard sphere gap measurements of HV AC, HV DC, and impulse voltages	"		
38	6/9	04-10-2016	Factors affecting the measurements	"		
39	6/9	07-10-2016	Potential dividers-resistance dividers capacitance dividers mixed RC potential dividers.	"		
40	6/9	08-10-2016	Measurement of high impulse currents-Rogogowsky coil and Magnetic Links.	PPT	Assignment 6	
41	7/5	08-10-2016	UNIT 7: Dielectric loss and loss angle measurements using Schering Bridge	Chalk & Talk		
42	7/5	13-10-2016	Transformer ratio Arms Bridge.	"		
43	7/5	14-10-2016	Need for discharge detection and PD Measurements aspects.	"		
44	7/5	19-10-2016	Factor affecting the discharge detection.	"		
45	7/5	20-10-2016	Discharge detection methods-straight and balanced methods.	"	Assignment 7	
46	4/7	20-10-2016	UNIT 4: HV AC-HV transformer;.	"		
47	4/7	21-10-2016	Need for cascade connection and working of transformers units connected in cascade	"		
48	4/7	22-10-	Series resonant circuit- principle of	"		

		2016	operation and advantages			
49	4/7	02-11-2016	Tesla coil. HV DC- voltage doubler circuit,	"		
50	4/7	03-11-2016	cock croft- Walton type high voltage DC set.	"		
51	4/7	03-11-2016	Calculation of high voltage regulation	"		
52	4/7	04-11-2016	ripple and optimum number of stages for minimum voltage drop	"		
53	8/6	05-11-2016	UNIT 8: Definitions of terminologies	"	Assignment 8	
54	8/6	07-11-2016	tests on isolators	"		
55	8/6	08-11-2016	Tests on Circuit breakers	"		
56	8/6	09-11-2016	tests on cables,	"		
57	8/6	09-11-2016	Tests on insulators	"		
58	8/6	19-11-2016	Tests on Transformers	"		

Signature of Faculty   **Signature of H.O.D**   **Signature of Principal**

Subject :- ID

CMR INSTITUTE

OF TECHNOLOGY

Session wise – Course Plan

Department of Electrical and Electronics Engineering

SEMESTER :VII   NAME OF THE FACULTY   : M.CHITHRA

BRANCH : EEE   DATE OF COMMENCEMENT   : 01-8-2016

SUBJECT : INDUSTRIAL DRIVES & APPLICATION   DATE OF CLOSING   : 10- 11-2016

SUBJECT CODE : 10EE74   CLASS STRENGTH   : 62(A)/58(B)

NO OF HRS/WK : 5   TOTAL HRS   : 55

Session No	Chapter no (No of hrs planed for the chapter)	DATE	Topics planned for the session	Teaching Aids	Assignments/ Tests planned for the chapter	Topics covered As per plan
1	1/1	3/8/16	UNIT I – AN INTRODUCTION TO ELECTRICAL DRIVES & ITS	Board,		

			DYNAMICS	chalk, duster		
			Electrical drives. Advantages of electrical drives.			
2	2/1	4/8/16	Parts of electrical drives,	,,		
3	3/1	5/8/16	Choice of electrical drives,	,,		
4	4/1	6/8/16	Status of dc and ac drives,	,,		
5	5/1	7/8/16	Dynamics of electrical drives, Fundamental torque equation,	,,		
6	6/1	10/8/16	Speed torque conventions and multi-quadrant operation.	,,		
7	7/1	11/8/16	Equivalent values of drive parameters,	,,	Assignment- I	
8	8/1	12/8/16	Components of low torques, nature and classification of load torques,	Board, chalk, duster		
9	9/1	13/8/16	Calculation of time and energy loss in transient operations,	,,		
10	10/1	14/8/16	Steady state stability,	,,		
11	11/1	18/8/16	Load equalization. Problems	,,	Assignment - II	
12	½	19/8/16	UNIT II –SELECTION OF MOTOR RATING Thermal model of motor for heating and cooling,	,,		
13	2/2	20/8/16	Classes of motor duty,	,,		

14	3/2	21/8/16	Determination of motor rating. (Continuous duty, fluctuating and intermittent loads)	,,		
16	4/2	22/8/16	Determination of motor rating. (Short time duty)		Assignment -III	
16	5/2	25/8/16	Determination of motor rating. (Intermittent periodic duty)			
17	6/2	26/8/16	Problem solving			
18	1/3	27/8/16	UNIT III & IV Dc motor drives starting			
19	2/3	28/8/16	Braking,	,,		
20	3/3	29/8/16	Transient analysis,	,,		
21	4/3	1/9/16	Single phase fully controlled rectifier control of dc separately excited motor,	,,		
22	5/3	2/9/16	Single-phase half controlled rectifier control of dc separately excited motor.			
23	6/3	3/9/16	Three phase fully controlled rectifier control of dc separately excited motor,	,,		
24	7/3	4/9/16	Three phase half controlled rectifier control of dc separately excited motor	,,		
25	1/4	7/9/16	Problems	,,	Assignment –IV	
26	2/4	9/9/16	Multi-quadrant operation of dc separately excited motor fed from fully controlled rectifier.			
27	3/4	10/9/16	Problems			

28	4/4	11/9/16	Rectifier control of dc series motor,	,,		
29	5/4	12/9/16	Chopper controlled dc drives,	,,		
30	6/4	18/9/16	chopper control of separately excited dc motor.	,,		
31	7/4	22/9/16	Problems			
32	8/4	23/9/16	Chopper control of series motor.	,,		
33	1/5	25/9/16	UNIT V- INDUCTION MOTOR DRIVES Operation with unbalanced source voltage and single phasing,	Board, chalk, duster	Assignment -V	
34	2/5	26/9/16	Operation with unbalanced rotor impedances,	,,		
35	3/5	28/9/16	Analysis of induction motor fed from non-sinusoidal voltage supply,	,,		
36	4/5	30/9/16	starting ,Braking	,,		
37	5/5	1/10/16	Transient analysis.	,,		
38	1/6	5/10/16	UNIT VII STATOR VOLTAGE CONTROL Variable voltage frequency control from voltage sources,	,,		
39	2/6	6/10/16	Voltage source inverter control,	,,		
40	3/6	7/10/16	Closed loop control,	,,		
41	4/6	9/10/16	Current source inverter control,	,,		

42	5/6	12/10/16	Current regulated voltage source inverter control,	,,	Assignment -VI	
43	7/6	13/10/16	Rotor resistance control, slip power recovery	,,		
44	8/6	14/10/16	Speed control of single phase induction motors.	Board, chalk, duster		
45	1/7	16/10/16	UNIT VII SYNCHRONUOS MOTOR DRIVES Operation from fixed frequency supply,	,,		
46	2/7	17/10/16	Synchronous motor variable speed drives,	,,		
47	3/7	19/10/16	Synchronous motor variable speed drives (continued)	,,		
48	4/7	20/10/16	Variable frequency control of multiple synchronous motors.	,,	Assignment -VII	
49	5/7	21/10/16	Self-controlled synchronous motor drive employing load commutated thruster inverter.			
50	6/7	31/10/16	Self-controlled synchronous motor drive employing load commutated thruster inverter.			
51	7/7	3/11/16	Problems			
52	1/8	4/11/16	UNIT VIII INDUSTRIAL DRIVES Rolling mill drives,	,,		
53	2/8	5/11/16	Cement mill drives,	,,	Assignment -VII	

| 54 | 3/8 | 6/11/16 | Paper mill drives, | ,, | | |
| 55 | 4/8 | 7/11/16 | Textile mill drives. | ,, | | |

Signature of faculty   Signature of HOD   Signature of Principal

Subject :- HVDC

CMR INSTITUTE OF TECHNOLOGY

Session wise – Course Plan

Department of Electrical & Electronics Engineering

SEMESTER   : VII   NAME OF THE FACULTY   : Ms T Aruna Kumari

BRANCH   : EEE   DATE OF COMMENCEMENT : 28-07-16

SUBJECT   : HVDC Transmission   DATE OF CLOSING   : 21 -11-16

SUBJECT CODE : 10EE751   CLASS STRENGTH   : 72

NO OF HRS/WK : 5   TOTAL HOURS   : 60

Session No	Chapter no./No. of hours planned	Date	Topics planned for the session	Teaching Aids	Assignments / Tests planned for the chapter	Topics Covered as per plan
1	1/10	01-08-2016	**Intro to HVDC Transmission**	Board, chalk, duster	Assignment - I	
2	2/10	02-08-2016	Intro to **UNIT - 1 & 2** **GENERAL ASPECTS OF DC TRANSMISSION AND COMPARISON OF IT WITH AC TRANSMISSION:**	"		
3	3/10	03-08-2016	Historical sketch,**.**	"		
4	4/10	04-08-2016	Historical sketch,**.**	"		
5	5/10	06-08-2016	constitution of EHV AC and DC links,	PPT Presentation	Assignment -II	
6	6/10	06-08-2016	Types of dc links			
7	7/10	08-08-2016	Limitations and Advantages of AC and DC Transmission**.**	"		
8	8/10	09-08-2016	Limitations and Advantages of AC and DC Transmission**.**	Board, chalk, duster		
9	9/10	10-08-2016	Revision of unit 1 & 2	PPT		

				Presentation		
10	1/12	11-08-2016	Intro to **UNIT - 3 & 4** **CONVERTER CIRCUITS:**	PPT Presentation	Assignment –III	
11	2/12	12-08-2016	Valve Characteristics,	Board, chalk, duster		
12	3/12	16-08-2016	Valve Characteristics,			
13	4/12	17-08-2016	Properties of converter circuits,	"		
14	5/12	18-08-2016	assumptions,	"		
15	6/12	19-08-2016	single phase converters	"		
16	7/12	20-08-2016	single phase converters	"	Assignment -IV	
17	8/12	22-08-2016	three phase converters,			
18	9/12	23-08-2016	three phase converters,	"		
19	10/12	24-08-2016	three phase converters,			

				"		
20	11/12		choice of best circuits for HV DC circuits.			
		25-08-2016		"		
21	12/12		Revision of unit 3 & 4			
		26-08-2016		"		
22	1/10		Intro to **UNIT - 5** **ANALYSIS OF THE BRIDGE CONVERTER:**	"	Assignment –V	
		27-08-2016				
23	2/10		Analysis with grid control but no overlap,	PPT Presentation		
		30-08-2016				
24	3/10		Analysis with grid control and with overlap less than 60 deg,			
		31-08-2016		"		
25	4/10		Analysis with grid control and with overlap less than 60 deg,	Board, chalk, duster		
		01-09-2016				
26	5/10		Analysis with overlap greater than 60 deg, ,			
		09-09-2016		"		
27	6/10		Analysis with overlap greater than 60 deg, ,			
		13-09-2016		"		
28	7/10		complete characteristics of rectifier			
		14-09-2016		"		
29	8/10		complete characteristics of rectifier			
		15-09-2016		"		
30	9/10		Inversion.			
		16-09-2016		"		

31	10/10	17-09-2016	Revision of unit V	"		
32	1/15	20-09-2016	Intro to **UNIT - 6 & 7** **CONTROL OF HVDC CONVERTERS AND SYSTEMS:**	"	Assignment –VI	
33	2/15	21-09-2016	grid control,	"		
34	3/15	22-09-2016	basic means of control,	Board, Chalk		
35	4/15	23-09-2016	power reversal,	"		
36	5/15	24-09-2016	limitations of manual control,	"		
37	6/15	26-09-2016	constant current versus constant voltage,			
38	7/15	27-09-2016	constant current versus constant voltage,	"	Assignment –VII	
39	8/15	28-09-2016	desired feature of control,	"		
40	9/15	29-09-2016	actual control characteristics,	"		
41	10/15	03-10-2016	constant -minimum -Ignition –angle control,	"		
42	11/15	04-10-2016	constant –current control,	"		
43	12/15	06-10-2016	constant –extinction –angle control,			

				"		
44	13/15	07-10-2016	Stability of control.	"		
45	14/15	08-10-2016	Revision of unit VI & VII	"		
46	15/15	13-10-2016	Revision of unit VI & VII	"		
47	1/12	14-10-2016	Intro to **UNIT - 8** **PROTECTION:**	"	Assignment –VIII	
48	2/12	18-10-2016	Introduction,	"		
49	3/12	19-10-2016	DC reactor,	"		
50	4/12	20-10-2016	voltage oscillations and valve dampers,	"		
51	5/12	21-10-2016	current oscillations and anode dampers,	"		
52	6/12	22-10-2016	current oscillations and anode dampers,	"		
53	7/12	28-10-2016	DC line oscillations and line dampers,	"		
54	8/12	02-11-2016	DC line oscillations and line dampers,	"		
55	9/12	03-11-2016	clear line faults	"		

56	10/12	04-11-2016	clear line faults	"		
57	11/12	05-11-2016	Reenergizing the line.	"		
58	12/12	07-11-2016	Revision of unit VIII	"		
59	-	08-11-2016	Revision	"		
60	-	09-11-2016	Revision	"		

Signature of faculty   Signature of HOD   Signature of Principal

Subject :- PLC

CMR INSTITUTE OF TECHNOLOGY

Session wise – Course Plan

Department of Electrical & Electronics Engineering

SEMESTER : VII

BRANCH : EEE

SUBJECT : PLC

SUBJECT CODE : 10EE752

NO OF HRS/WK : 5

NAME OF THE FACULTY : Mr. Anand Bhat B

DATE OF COMMENCEMENT : 28-07-16

DATE OF CLOSING : 21 -11-16

CLASS STRENGTH : 19

TOTAL HOURS : 56

Session No	Chapter no./No.of hours planned	Date	Topics planned for the session	Teaching Aids	Assignments / Tests planned for the chapter	Topics Covered as per plan
1	1/9	01-08-2016	Prerequisites: Role of control System, Examples of control circuits, Microprocessor control systems_	Board, chalk, duster		
2	1/9	02-08-2016	INTRODUTION: Introduction to Programmable logic controller (PLC), role in automation (SCADA)	"		
3	1/9	03-08-2016	Advantages and Disadvantages, Hardware, internal architecture	"		
4	1/9	04-08-2016	Sourcing and sinking, Characteristics of I/O devices	"		
5	1/9	06-08-2016	Input devices : Mechanical switch, proximity switch, Encoders	PPT Presentation		
6	1/9	08-08-2016	Temperature sensors,position sensors,strain gauge, Pressure sensors, Liquid level detectors,	"		

			Smart sensors			
7	1/9	09-08-2016	Output Devices, Examples of Applications	Board, chalk, duster		
8	1/9	10-08-2016	I/O processing, input/output units, signal conditioning	PPT Presentation		
9	1/9	11-08-2016	Remote connections, networks, processing inputs I/O addresses	PPT Presentation	Assignment - I	
10	2/6	16-08-2016	Unit :2 Programming Ladder diagrams, PLC ladder programming	Board, chalk, duster		
11	2/6	17-08-2016	Logic Functions: AND, OR, NAND & NOR – NOT & XOR – Circuits and ladder diagrams, Latching	"		
12	2/6	18-08-2016	Multiple outputs – Ladder rung with two outputs, Ladder rung with two inputs & two outputs. Entering programs, Ladder symbols	"		
13	2/6	19-08-2016	Function blocks – for Logic gates, Ladder diagrams and equivalent functional block diagram	"		

14	2/6	20-08-2016	Boolean Algebra, Location of stop and emergency switches	"		
15	2/6	23-08-2016	Program examples	"	Assignment -II	
16	3&4/10	24-08-2016	Unit 3 & 4: Instruction Lists – Ladder programs & instruction lists	"		
17	3&4/10	25-08-2016	Instruction list – Branch codes, more than one rung	"		
18	3&4/10	26-08-2016	Programming examples	"		
19	3&4/10	27-08-2016	Sequential function charts – with example	"		
20	3&4/10	30-08-2016	Branching and convergence, Actions	PPT Presentation	Assignment -III	
21	3&4/10	31-08-2016	Structures text – Conditional statements	"		
22	3&4/10	01-09-2016	Iteration statements, Structured text programs, comparison with ladder programs	Board, chalk, duster		
23	3&4/10	09-09-2016	Jump – Jumps within jumps,	"		
24	3&4/10	13-09-2016	Subroutines, Function boxes	"		

25	3&4/10	14-09-2016	Problems- Revision	"	Assignment –IV	
26	5/5	15-09-2016	Unit 5: Internal relays – ladder programs- Programs with multiple input conditions	"		
27	5/5	16-09-2016	Latching programs, Response time	"		
28	5/5	17-09-2016	Battery backed relays, One shot operation	"		
29	5/5	20-09-2016	Set and Reset, Program examples	"		
30	5/5	21-09-2016	Master control relay, Examples of programs	"	Assignment -V	
31	6&7/12	22-09-2016	Units 6 & 7: Timers& Counters: Types of timers, On Delay timers	Board, Chalk		
32	6&7/12	23-09-2016	Sequencing, Cascaded timers	"		
33	6&7/12	24-09-2016	On/Off cycle timer, Off-Delay timer	"		
34	6&7/12	27-09-2016	Pulse timer, Retentive timers	"	Assignment -VI	
35	6&7/12	28-09-2016	Programming examples	"		
36	6&7/12	29-09-2016	Exercises	"		

37	6&7/12	03-10-2016	Counters: Forms of counter, Programming	"		
38	6&7/12	04-10-2016	Counter Application	"		
39	6&7/12	06-10-2016	Up and down computing	"		
40	6&7/12	07-10-2016	Timers with counters, Sequencer	"		
41	6&7/12	08-10-2016	Programming examples	"	Assignment –VII	
42	6&7/12	13-10-2016	Revision & discussion on VTU questions	"		
43	8/10	14-10-2016	Unit 8: Shift register & Data handling – Shift registers	"		
44	8/10	18-10-2016	Ladder programs	"		
45	8/10	19-10-2016	Sequencing application	"		
46	8/10	20-10-2016	Data handling: Registers and bits	"		
47	8/10	21-10-2016	Data Movement	"		
48	8/10	22-10-2016	Data comparison	"		

49	8/10	28-10-2016	Data selection, Arithmetic operations	"		
50	8/10	02-11-2016	Closed loop control – modes of control	"		
51	8/10	03-11-2016	Control with a PLC, Temperature control applications	"		
52	8/10	04-11-2016	Bottle packing application.	"	Assignment –VIII	
53	-	05-11-2016	Revision	G.D		
54	-	07-11-2016	Revision	G.D		
55	-	08-11-2016	VTU Question Paper Discussion	G.D		
56	-	09-11-2016	VTU Question Paper Discussion	G.D		

Signature of Faculty   **Signature of H.O.D**   **Signature of Principal**

Subject :- TC

CMR INSTITUTE OF TECHNOLOGY

Session wise – Course Plan

Department of Electrical & Electronics Engineering

SEMESTER   : VII   NAME OF THE FACULTY   : Ms. SARANYA.S

BRANCH   : EEE   DATE OF COMMENCEMENT : 28-07-16

SUBJECT   : Testing &Commissioning   DATE OF CLOSING   : 21 -11-16

Session No	Chapter no./No.of hours planned	Date	Topics planned for the session	Teaching Aids	Assignments / Tests planned for the chapter	Topics Covered as per plan
1	1/16	01-08-2016	Introduction(UNIT 1&2)	Board, chalk, duster		
2	2/16	02-08-2016	**Specification** : Power and distribution transformers as per BIS standards	"		
3	3/16	03-08-2016	**Installation:** Location, site, selection, foundation details Foundation details	"		
4	4/16	04-08-2016	code of practice for terminal plates polarity & phase sequence	"		
5	5/16	06-08-2016	Transformer oil	PPT Presentation		
6	6/16	08-08-2016	Dying of winding and general inspection	"		
7	7/16	09-08-	**Commissioning tests** Testing of transformers, polarity tests, volt	Board,		

		2016	ratio test, , earth resistance, oil strength	chalk, duster		
8	8/16	10-08-2016	earth resistance, oil strength Bucholz & other relays	PPT Presentation		
9	9/16	11-08-2016	Bucholz & other relays tap changing gear, fans & pumps	PPT Presentation	Assignment - I	
10	10/16	16-08-2016	tap changing gear, fans & pumps insulation test, impulse test	Board, chalk, duster		
11	11/16	17-08-2016	insulation test, impulse test polarizing index	"		
12	12/16	18-08-2016	polarizing index load & temperature rise test. load & temperature rise test	"		
13	13/16	19-08-2016	**Specific Tests** :Determination of performance curves, like efficiency	"		
14	14/16	20-08-2016	Determination of performance curves like regulation	"		
15	15/16	23-08-	Determination of mechanical stress		Assignment	

		2016	under normal conditions	"	-II	
16	16/16	24-08-2016	Determination of mechanical stress under abnormal conditions	"		
17	1/14	25-08-2016	**Synchronous machines⊗UNIT 3 & 4)** Specification & physical details	"		
18	2/14	26-08-2016	**Installation** :foundation details, alignments, excitation systems	"		
19	3/14	27-08-2016	cooling and control gear , drying out.	"		
20	4/14	30-08-2016	**Commissioning Tests:** Insulation, Resistance measurement of armature & field windings	PPT Presentation		
21	5/14	31-08-2016	waveform & telephone interference tests	"		
22	6/14	01-09-2016	line charging capacitance.	Board, chalk, duster		
23	7/14	09-09-2016	**Performance tests** :slip test, maximum lagging current	"		
24	8/14	13-09-2016	maximum reluctance power tests, sudden short circuit tests	"		
25	9/14	14-09-2016	transient & sub transient parameters	"	Assignment –III	
26	10/14	15-09-	measurements of sequence			

		2016	impedances, capacitive reactance	"		
27	11/14	16-09-2016	separation of losses	"		
28	12/14	17-09-2016	Temperature rise test, and retardation tests.	"		
29	13/14	20-09-2016	Gap length, magnetic eccentricity	"		
30	14/14	21-09-2016	Balanci14ng vibrations, bearing performance	"	Assignment -IV	
31	1/16	22-09-2016	**Induction motors:UNIT (5,6,7)** **specifications** for different types of motors, Duty, I.P. protection	Board, Chalk		
32	2/16	23-09-2016	**Installation:** Location of the motors (including the foundation details)	"		
33	3/16	24-09-2016	control apparatus	"		
34	4/16	27-09-2016	shaft & alignment for various coupling,	"		
35	5/16	28-09-2016	fitting of pulleys & coupling, drying of windings	"		
36	6/16	29-09-2016	**Commissioning Test** Mechanical tests for alignment	"		
37	7/16	03-10-2016	air gap symmetry, tests for bearings	"		

38	8/16	04-10-2016	tests for bearings, Vibration and balancing	"		
39	9/16	06-10-2016	**Electrical Tests** Insulation test, earth resistance	"		
40	10/16	07-10-2016	high voltage test, starting up failure to speed up to take the load	"		
41	11/16	08-10-2016	type of test, routine test	"	Assignment –V	
42	12/16	13-10-2016	factory test and site test	"		
43	13/16	14-10-2016	**Tests** : Performance and temperature rise tests	"		
44	14/16	18-10-2016	Stray load loses	"		
45	15/16	19-10-2016	Shaft alignment	"		
46	16/16	20-10-2016	Re-rating and special duty capability Basic problems	"		
47	1/10	21-10-2016	**SWITCH GEAR & PROTECTIVE DEVICES:** Standards and types	"		
48	2/10	22-10-2016	Specification	"		
49	3/10	28-10-2016	Foundation	"		

50	4/10	02-11-2016	installation Commissioning tests	"		
51	5/10	03-11-2016	Commissioning tests	"		
52	6/10	04-11-2016	maintenance schedule	"	Assignment –VI	
53	7/10	05-11-2016	Type test			
54	8/10	07-11-2016	routine tests			
55	9/10	08-11-2016	revision			
56	10/10	09-11-2016	revision			

Subject :- PSP

CMR INSTITUTE

OF TECHNOLOGY

Session wise – Course Plan

Department of Electrical And Electronics Engg

SEMESTER : VII	NAME OF THE FACULTY : Ms. Sharen Ranjit
BRANCH : EEE	DATE OF COMMENCEMENT : 28.08.2016
SUBJECT : POWER SYSTEM PLANNING	DATE OF CLOSING : 21.11.2016
SUBJECT CODE : 10EE761	CLASS STRENGTH : 89
NO OF HRS/WK : 5	TOTAL HOURS : 62

Session No.	Chapter no. (No of hrs planned for the chapter)	Date	Topics planned for the session	Teaching Aids	Assignments/ Tests planned for the chapter	Topics covered as per plan

1	1/1(Unit 1)	1/8/2016	**Introduction of power planning:** National and regional planning	board	Pre-requisites	
2	2/1	2/8/2016	National and regional planning	"		
3	3/1	3/8/2016	Structure of power system	"		
4	4/1	5/8/2016	Structure of power system	"		
5	5/1	6/8/2016	Planning tools	"		
6	6/1	8/8/2016	Planning tools	"	Assignment-1	
7	7/1	9/8/2016	Electricity regulation	"		
8	8/1	10/8/2016	Electricity regulation	"		
9	9/1	11/8/2016	Load forecasting	"		
10	10/1	12/8/2016	Load forecasting	"		
11	11/1	16/8/2016	Forecasting techniques	"		
12	12/1	17/8/2016	Forecasting techniques	"		
13	13/1	18/8/2016	Modeling	"		
14	14/1	19/8/2016	Modeling	"		
15	1/2(Unit 2)	20/8/2016	**Generation planning :** Integrated power generation	"		
16	2/2	22/8/2016	Integrated power generation	"		
17	3/2	23/8/2016	Co-generation / captive power	"		
18	4/2	24/8/2016	Power pooling and power trading	"		
19	5/2	25/8/2016	Transmission & distribution planning	"		

20	**6/2**	26/8/2016	Transmission & distribution planning	”	Assignment-2	
21	**7/2**	27/8/2016	Power system economics	”		
22	**8/2**	30/8/2016	Power sector finance	”		
23	**9/2**	30/8/2016	Financial planning	”		
24	**10/2**	1/9/2016	Financial planning	”		
25	**11/2**	9/9/2016	Private participation	”		
26	**13/2**	10/9/2016	Rural electrification investment,	”		
27	**14/2**	13/9/2016	concept of rational tariffs	”		
28	**1/3(Unit 3)**	14/9/2016	**Computer aided planning :** Wheeling	”		
29	**2/3**	16/9/2016	Environmental effects	”		
30	**3/3**	19/9/2016	Green house effect	”		
31	**4/3**	21/9/2016	technological impacts	”		
32	**5/3**	23/9/2016	Insulation co-ordination	”	Assignment-3	
33	**6/3**	24/9/2016	Insulation co-ordination	”		
34	**7/3**	26/9/2016	Reactive compensation	”		
35	**8/3**	27/9/2016	Reactive compensation	”		
36	**1/4(Unit 4)**	28/9/2016	**Power supply reliability :** Introduction	”		
37	**2/4**	29/9/2016	Reliability planning	”		
38	**3/4**	3/10/2016	Reliability planning	”		
39	**4/4**	4/10/2016	System operation planning	”		
40	**5/4**	5/10/2016	Load management	”	Assignment-4	

41	**6/4**	6/10/2016	Load management	"		
42	**7/4**	7/10/2016	load prediction	"		
43	**8/4**	8/10/2016	Reactive power balance	"		
44	**9/4**	13/10/2016	Reactive power balance	"		
45	**10/4**	17/10/2016	Online power flow studies	"		
46	**11/4**	18/10/2016	Test estimation	"		
47	**12/4**	19/10/2016	computerized management	"		
48	**13/4**	21/10/2016	Power system simulator	"		
49	**1/5(Unit 5)**	22/10/2016	Optimal power system expansion planning	"	Assignment-5	
50	**2/5**	27/10/2016	Optimal power system expansion planning	"		
51	**3/5**	27/10/2016	Formulation of least cost optimization problem incorporating the capital	"		
52	**4/5**	28/10/2016	Formulation of least cost optimization problem incorporating the capital	"		
53	**5/5**	28/10/2016	Operating and maintenance cost of candidate plants of different types	"		
54	**6/5**	2/11/2016	Optimization techniques for solution by programming	"		
55	**7/5**	3/11/2016	Optimization techniques for solution by programming	"		
56		4/11/2016	REVISION			
57		5/11/2016	REVISION			

58		5/11/2016	REVISION			
59		7/11/2016	Question paper discussion			
60		7/11/2016	Question paper discussion			
61		8/11/2016	Question paper discussion			
62		8/11/2016	Question paper discussion			

Subject :- VLSI

CMR INSTITUTE

OF TECHNOLOGY

Session wise – Course Plan

Department of Electrical and Electronics Engineering

Semester : VII	Name Of the Faculty : VINAY B K
Branch : EEE	Date Of Commencement : 25.07.2016
Subject : VLSI CIRCUITS AND DESIGN	Date Of Closing : 02.11.2016
Subject Code : 10EE764	Class Strength : 38
No Of Hrs/ Wk: 5	Total Hrs : 56

Session No	Chapter no (No of hrs planed for the chapter)	Date	Topics planned for the session	Teaching Aids	Assignments/ Tests planned for the chapter	Topics covered as per plan
1	**1/1**	25/07/2016	**Unit - 1**	Board &		

			A review of microelectronics and an introduction to MOS technology Introduction to integrated circuit technology	chalk		
2	**2/1**	26/07/2016	Introduction, VLSI technologies,	,,	Assignme nt- I	
3	**3/1**	28/07/2016	MOS transistors,	,,		
4	**4/1**	29/07/2016	Thermal aspects, Fabrication,	,,		
5	**5/1**	30/07/2016	Fabrication (Twin Tub Process)			
6	**6/1**	01/07/2016	Production of E-beam masks			
7	**1/2**	02/08/2016	**Unit - 2** **Basic electrical properties of MOS and BICMOS circuit**: Introduction,	,,		
8	**2/2**	04/08/2016	Drain to source current I_{ds} Versus V_{ds} relationships	,,		
9	**3/2**	05/08/2016	BICMOS latch up susceptibility.	,,		
10	**4/2**	06/08/2016	MOS transistor characteristics,	,,		
11	**5/2**	08/08/2016	Figure of merit,	,,	Assignme nt -II	
12	**6/2**	09/08/2016	Pass transistor NMOS and CMOS inverters, circuit model,	,,		
13	**7/2**	11/08/2016	CMOS inverters, circuit model(cont)	,,		
14	**8/2**	12/08/2016	Latch up in CMOS circuits.	,,		
15	**1/3**	16/08/2016	**Unit - 3** **MOS and BICMOS circuit design processes** MOS layers,	LCD Projector		

16	**2/3**	17/08/2016	Stick diagrams,	,,		
17	**3/3**	18/08/2016	Stick diagrams(cont)	,,		
18	**4/3**	20/08/2016	Design of logic circuits	,,		
19	**5/3**	22/08/2016	Design(cont)	,,	Assignme nt –III	
20	**6/3**	23/08/2016	Symbolic diagram	,,		
21	**7/3**	24/08/2016	Symbolic diagram (Cont)	,,		
22	**1/4**	25/08/2016	**Unit - 4** **Basic circuit concepts** Sheet resistance	Board & chalk		
23	**2/4**	27/08/2016	Capacitance	,,		
24	**3/4**	29/08/2016	Layer inverter delays,	,,		
25	**4/4**	30/08/2016	Layer inverter delays(cont)	,,	Assignmnt –IV	
26	**5/4**	31/08/2016	Wiring capacitance,	,,		
27	**6/4**	01/09/2016	Wiring capacitance(cont)	,,		
28	**7/4**	09/09/2016	Choice of layers	,,		
29	**1/5**	10/09/2016	**Unit - 5** **Scaling of MOS circuits.** Introduction	Board & chalk		
30	**2/5**	13/09/2016	Scaling model and scaling factors	,,		
31	**3/5**	14/09/2016	Scaling model and scaling factors (cont)	,,		
32	**4/5**	15/09/2016	Scaling model and scaling factors (cont)	,,		
33	**5/5**	17/09/2016	Limitations due to current	,,	Assignme	

			Density.		nt -V	
34	**6/5**	19/09/2016	Limitations due to current density(cont)	,,		
35	**1/6**	20/09/2016	**Unit - 6** **Subsystem design and layout**: Architectural issues,	Board & chalk		
36	**2/6**	21/09/2016	Architectural issues(cont)	,,		
37	**3/6**	22/09/2016	System considerations	,,	Assignme nt -VI	
38	**4/6**	24/09/2016	System considerations (cont)	,,		
39	**5/6**	26/09/2016	Examples of structural design	,,		
40	**6/6**	27/09/2016	Examples of structural design(cont)	,,		
41	**7/6**	28/09/2016	Clocked sequential circuits	,,		
42	**8/6**	29/09/2016	Clocked sequential circuits(cont)	,,		
43	**1/7**	04/10/2016	**Unit - 7** **Subsystem design processes** General considerations,	Board & chalk		
44	**2/7**	05/10/2016	Illustration of design process,	,,		
45	**3/7**	06/10/2016	Illustration of design process (cont)	,,	Assignme nt -VII	
46	**4/7**	07/10/2016	Observations.	,,		
47	**5/7**	08/10/2016	Observations (cont)	,,		
48	**1/8**	14/10/2016	**Unit - 8** **Illustration of the design process:** Observation on the design of an	Board & chalk		

			process,			
49	**2/8**	17/10/2016	Regularity Design	,,		
50	**3/8**	18/10/2016	ALU subsystem	,,		
51	**4/8**	19/10/2016	Design of 4-bit Adder	,,		
52	**5/8**	20/10/2016	Implementation of ALU functions.	,,	Assignment -VIII	
53	**6/8**	22/10/2016	Implementation of ALU functions (cont)	,,		
54		27/10/2016	Revision	,,		
55		28/10/2016	Discussion of previous question papers.	,,		
56		02/11/2016	Discussion of previous question papers.	,,		

Signature of faculty   Signature of HOD   Signature of Principal