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CMR INSTITUTE OF TECHNOLOGY

Session wise – Course Plan

Department of Electrical and Electronics Engineering

SEMESTER : VI
BRANCH : EEE
SUBJECT : PSA
SUBJECT CODE : 10EE61
NO OF HRS/WK : 5

NAME OF THE FACULTY : Ms. Shikha Gupta
DATE OF COMMENCEMENT: 27/01/16
DATE OF CLOSING : 21/05/16
CLASS STRENGTH : 61/56
TOTAL HRS : 5+5

S.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**	27.01.2016	**Unit –1] REPRESENTATION OF POWER SYSTEM COMPONENTS:** Introduction to PSA	Board, chalk, Duster	Prerequisite	
2	**2/1**	28.01.2016	Circuit models of transmission line, synchronous machines	,,		
3	**3/1**	30.01.2016	transformers and load	,,		
4	**4/1**	01.02.2016	Single line diagrams.Impedance and reactance diagrams	,,	Assignment - I	
5	**5/1**	02.02.2016	Per unit system, per unit impedence diagrams.	,,		
6	**6/1**	03.02.2016	Numericals.	,,		
7	**7/1**	04.02.2016	Numericals.			
8	**8/1**	08.02.2016	Numericals.	,,		
9	**9/1**	09.02.2016	Numericals.			
10	**1/2**	10.02.2016	**Unit –2] SYMMETRICAL 3-PHASE FAULTS** Introduction. Analysis of	Board, chalk, Duster		

			synchronous machines and power system			
11	**2/2**	11.02.2016	Transients on a transmission line	,,		
12	**3/2**	12.02.2016	Short circuit currents and reactance of synchronous machines with and without load.	,,	Assignment -II	
13	**4/2**	15.02.2016	Short circuit currents and reactance of synchronous machines with and without load	,,		
14	**5/2**	16.02.2016	Numericals.			
15	**6/2**	17.02.2016	Numericals.	,,		
16	**7/2**	18.02.2016	Numericals.			
17	**8/2**	22.02.2016	Numericals.	,,		
18	**1/3&4**	24.02.2016	**Unit –3&4] SYMMETRICAL COMPONENTS:** Introduction	Board, chalk, Duster		
19	**1/3&4**	26.02.2016	Analysis of unbalanced load against balanced 3-phase supply	,,		
20	**2/3&4**	29.02.2016	Neutral shift. Resolution of unbalanced phasors into their symmetrical components	,,		
21	**3/3&4**	01.03.2016	Phase shift of symmetrical components in star-delta transformer bank. Power in terms of symmetrical components. Numericals	,,	Assignment –III	
22	**4/3&4**	03.03.2016	Analysis of balanced and unbalanced loads against unbalanced 3-phase supply			
23	**5/3&4**	04.03.2016	Sequence impedances and networks of power system elements	,,		
24	**6/3&4**	05.03.2016	Sequence networks of power systems. Numericals	,,	Assignmnt –IV	
25	**7/3&4**	08.03.2016	Measurement of sequence impedence of synchronous generator. Numericals	,,		
26	**8/3&4**	09.03.2016	Numericals.	,,		
27	**1/5&6**	11.03.2016	**Unit –5&6] UNSYMMETRICAL FAULTS:** LG,LL faults on an unbalanced alternator without fault impedance	Board, chalk, Duster		

28	**2/5&6**	17.03.2016	LLG faults on an unbalanced alternator without fault impedance	,,		
29	**3/5&6**	18.03.2016	LG,LL faults on an unbalanced alternator with fault impedance	,,		
30	**4/5&6**	19.03.2016	LLG faults on an unbalanced alternator with fault impedance			
31	**5/5&6**	21.03.2016	Unsymmetrical faults on a power system without fault impedance		Assignment -V	
32	**6/5&6**	23.03.2016	Unsymmetrical faults on a power system with fault impedance			
33	**7/5&6**	24.03.2016	Open conductor faults in power system.	,,		
34	**8/5&6**	28.03.2016	Open conductor faults in power system	,,		
35	**9/5&6**	29.03.2016	Numericals.	,,		
36	**10/5&6**	30.03.2016	Numericals.	,,		
37	**11/5&6**	01.04.2016	Numericals.	,,	Assignment -VI	
38	**12/5&6**	02.04.2016	Numericals.	,,		
39	**13/5&6**	04.04.2016	Numericals.	,,		
40	**14/5&6**	05.04.2016	Numericals.	,,		
41	**1/7**	06.04.2016	**Unit –7] STABILITY STUDIES:** Introduction. Steady state and transient stability.	Board, chalk, Duster		
42	**2/7**	11.04.2016	Rotor dynamics and the swing equation.	,,	Assignment –VII	
43	**3/7**	12.04.2016	Equal area criterion for transient stability evaluation and its applications	,,		
44	**4/7**	13.04.2016	Numericals.	,,		
45	**5/7**	15.04.2016	Numericals.	,,		
46	**6/7**	16.04.2016	Numericals.	,,		
47	**7/7**	20.04.2016	Numericals.	,,		

48	**1/8**	21.04.2016	**Unit –8] UNBALANCED OPERATION OF THREE PHASE INDUCTION MOTORS**	Board, chalk, Duster	Assignment –VIII	
49	**2/8**	22.04.2016	Analysis of three phase induction motor with unbalanced voltage.	,,		
50	**3/8**	23.04.2016	Analysis of three phase IM with one line open	,,		
51	**4/8**	28.04.2016	Analysis of three phase IM with one line open			
52	**5/8**	30.04.2016	Analysis of three phase induction motor with unbalanced voltage			
53	**6/8**	02.05.2016	Numericals.			
54	**7/8**	03.05.2016	Numericals.			
55		04.05.2016	Revision			
56		05.05.2016	Revision			
57		07.05.2016	Revision			
58		10.05.2016	Revision			
59		11.05.2016	Revision			

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CMR INSTITUTE OF TECHNOLOGY

Session wise – Course Plan

Department of Electrical And Electronics Engg

SEMESTER : VI
BRANCH : EEE
SUBJECT : SGP
SUBJECT CODE : 10EE62

NAME OF THE FACULTY : Ms. Priyanka.P
DATE OF COMMENCEMENT : 27.01.2016
DATE OF CLOSING : 21.05.2016
CLASS STRENGTH : 117
NO OF HRS/WK : 5
TOTAL HOURS : 60

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**	27.01.2016	Introduction, energy management of power system, definition of switchgear, switches - isolating, load breaking and earthing.	Board, chalk, duster	Prerequisite Assignment	
2	**1/2**	28.01.2016	Introduction to fuse**,** fuse law, cut -off characteristics,:	,,		
3	**1/3**	29.01.2016	Time current characteristics, fuse material	,,	Assignment-I	
4	**1/4**	29.01.2016	, HRC fuse, liquid fuse, Application of fuse .	,,		
5	**1/5**	30.01.2016	Solution of question paper Unit :1	,,		
6	1/6	01.02.2016	discussion	,,		
7	**2/1**	03.02.2016	Introduction, requirement of a circuit breakers	,,	Assignment -II	
8	**2/2**	04.02.2016	difference between an isolator and circuit breaker, basic principle of operation of a circuit breaker	,,		
9	**2/3**	05.02.2016	phenomena of arc, properties of arc, initiation and maintenance of arc	,,		
10	**2/4**	05.02.2016	arc interruption theories - slepian's theory and energy balance theory**,**	,,		
11	**2/5**	08.02.2016	Restriking voltage, recovery voltage,	,,		
12	**2/6**	09.02.2016	Rate of rise of Restriking voltage, DC circuit breaking	,,		
13	**2/7**	11.02.2016	AC circuit breaking, current chopping	,,		
14	**2/8**	12.02.2016	capacitance switching, resistance switching,	,,		
15	**2/9**	13.02.2016	Rating of Circuit breakers	,,		
16	**2/10**	13.02.2016	Problems	,,		
17	**2/11**	15.02.2016	Problems	,,		
18	**3&4/1**	16.02.2016	Air Circuit breakers – Air break and Air blast Circuit breakers	,,		
19	**3&4/2**	18.02.2016	oil Circuit breakers - Single break, double break,	,,		
20	**3&4/3**	22.02.2016	minimum OCB	,,		
21	**3&4/4**	23.02.2016	SF_6 breaker - Preparation of SF_6 gas, Puffer and non Puffer type of SF_6 breakers	,,	Assignment –III	
22	**3&4/5**	23.02.2016	SF_6 breaker - Preparation of SF_6 gas, Puffer and non Puffer type of SF_6 breakers	,,		
23	**3&4/6**	24.02.2016	Vacuum circuit breakers - principle of operation and constructional details.	,,		
24	**3&4/7**	25.02.2016	Advantages and disadvantages of different types of Circuit breakers	,,		
25	**3&4/8**	29.02.2016	Testing of Circuit breakers, Unit testing, synthetic testing, substitution test,	,,		

26	**3&4/9**	01.03.2016	compensation test and capacitance test.	,,		
27	**3&4/10**	02.03.2016	Causes of over voltages – internal and external, lightning	,,	Assignment –IV	
28	**3&4/11**	02.03.2016	working principle of different types of lightning arresters, Shield wires.	,,		
29	**3&4/12**	03.03.2016	problem	,,		
30	**3&4/13**	04.03.2016	Solution of question paper Unit :3	,,		
31	**3&4/14**	08.03.2016	Solution of question paper Unit :4	,,		
32	**5/1**	09.03.2016	Requirement of Protective Relaying, Zones of protection	,,		
33	**5/2**	10.03.2016	primary and backup protection	,,		
34	**5/3**	10.03.2016	Essential qualities of Protective Relaying	,,		
35	**5/4**	11.03.2016	Classification of Protective Relays	,,		
36	**5/5**	17.03.2016	Discussion	,,	Assignment -V	
37	**6/1**	19.03.2016	Non-directional and directional over current relays	,,		
38	**6/2**	21.03.2016	IDMT and Directional characteristics	,,		
39	**6/3**	22.03.2016	Differential relay – Principle of operation, percentage differential relay	,,		
40	**6/4**	22.03.2016	bias characteristics, distance relay	,,		
41	**6/5**	23.03.2016	Three stepped distance protection	,,		
42	**6/6**	24.03.2016	Impedance relay, Reactance relay	,,		
43	**6/7**	29.03.2016	Mho relay	,,		
44	**6/8**	30.03.2016	Buchholz relay, Negative Sequence relay	,,		
45	**6/9**	31.03.2016	Microprocessor based over current relay – block diagram approach	,,		
46	**6/10**	31.03.2016	problem	,,		
47	**6/11**	01.04.2016	problem	,,	Assignment -VI	
48	6/12	02.04.2016	Solution of question paper ,: Unit :5&6	,,		
49	**7&8/1**	05.04.2016	Generator Protection - Merz price protection,	,,		

50	**7&8/2**	06.04.2016	prime mover faults, stator and rotor faults	,,		
51	**7&8/3**	07.04.2016	prime mover faults, stator and rotor faults	,,		
52	**7&8/4**	07.04.2016	protection against abnormal conditions – unbalanced loading, loss of excitation, over speeding.	,,		
53	**7&8/5**	11.04.2016	Transformer Protection - Differential protection,	,,		
54	**7&8/6**	12.04.2016	differential relay with harmonic restraint, Inter turn faults Induction motor protection	,,		
55	**7&8/7**	15.04.2016	protection against electrical faults such as phase fault	,,		
56	**7&8/8**	16.04.2016	ground fault, and abnormal operating conditions such as single phasing	,,		
57	**7&8/9**	18.04.2016	phase reversal, over load.	,,		
58	**7&8/10**	18.04.2016	differential relay with harmonic restraint,	,,		
59	**7&8/11**	20.04.2016	Numerical	,,	Assignment -VII	
60	**7&8/12**	21.04.2016	Numerical	,,		
61		23.04.2016	Solution of question paper , Unit 1	,,		
62		28.04.2016	Solution of question paper , Unit 1	,,		
63		29.04.2016	Solution of question paper , Unit 2	,,		
64		29.04.2016	Solution of question paper , Unit 2	,,		
65		30.04.2016	Solution of question paper , Unit 3&4	,,		
66		02.05.2016	Solution of question paper , Unit 3&4	,,		
67		04.05.2016	Solution of question paper ,: Unit :5	,,		
68		05.05.2016	Solution of question paper Unit :6	,,		
69		06.05.2016	Solution of question paper Unit :6	,,		
70		06.05.2016	Solution of question paper Unit :7	,,		
71		07.05.2016	Solution of question paper Unit :8	,,		
72		10.05.2016	Solution of question paper Unit :8	,,		

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CMR INSTITUTE OF TECHNOLOGY

Session wise – Course Plan

Department of Electrical And Electronics Engg

SEMESTER : VI
BRANCH : EEE
SUBJECT : EMD
SUBJECT CODE : 10EE63

NAME OF THE FACULTY : Ms. Keka M
DATE OF COMMENCEMENT : 27.01.2016
DATE OF CLOSING : 21.05.2016
CLASS STRENGTH : 117
NO OF HRS/WK : 6
TOTAL HOURS : 72

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**	27.01.2016	Considerations of Electrical Machine Design, limitations	Board, chalk, duster	Prerequisite Assignment	
2	**2/1**	28.01.2016	Different types of materials used in electrical machines	,,		
3	**1/3&4**	29.01.2016	Design of single phase and three phase transformer :Output equation Output equation for single and three phase transformer .	,,	Assignment-I	
4	**2/3&4**	29.01.2016	Expression for volt/turn,	,,		
5	**3/3&4**	30.01.2016	Determination of main dimensions	,,		
6	**4/3&4**	01.02.2016	Determination of main dimensions	,,		
7	**5/3&4**	03.02.2016	Estimation of number of turns and cross sectional area of conductors	,,	Assignment -II	
8	**6/3&4**	04.02.2016	Problems on main dimensions	,,		
9	**7/3&4**	05.02.2016	Problems on main dimensions	,,		
10	**8/3&4**	05.02.2016	Problems on main dimensions	,,		
11	**9/3&4**	08.02.2016	Estimation of no load current	,,		
12	**10/3&4**	09.02.2016	Problems on calculation of no load current	,,		

13	**11/3&4**	11.02.2016	Expression for leakage reactance and voltage regulation	,,		
14	**12/3&4**	12.02.2016	Problems	,,		
15	**13/3&4**	13.02.2016	Tank design Calculation of no of cooling tubes Problems on design of tank	,,		
16	**1/5&6**	13.02.2016	Design of induction motor: Output equation	,,		
17	**2/5&6**	15.02.2016	Choice of specific magnetic loadings	,,		
18	**3/5&6**	16.02.2016	Choice of specific electric loadings	,,		
19	**4/5&6**	18.02.2016	Main dimensions of 3 phase induction motor	,,		
20	**5/5&6**	22.02.2016	Stator winding design	,,		
21	**6/5&6**	23.02.2016	Choice of airgap length	,,	Assignment –III	
22	**7/5&6**	23.02.2016	Problems on stator design	,,		
23	**8/5&6**	24.02.2016	Problems on stator design	,,		
24	**9/5&6**	25.02.2016	Estimation of no of slots for for squirrel cage rotor	,,		
25	**10/5&6**	29.02.2016	Design of rotor bars and end rings	,,		
26	**11/5&6**	01.03.2016	Design of rotor bars and end rings	,,		
27	**12/5&6**	02.03.2016	Problems on squirrel cage rotor design	,,		
28	**13/5&6**	02.03.2016	Design of slip ring induction motor	,,		
29	**14/5&6**	03.03.2016	Design of slip ring induction motor	,,		
30	**15/5&6**	04.03.2016	Numerical	,,		
31	**16/5&6**	08.03.2016	Numerical	,,		
32	**17/5&6**	09.03.2016	Estimation of no load current	,,		
33	**18/5&6**	10.03.2016	Estimation of leakage reactance, circle diagram	,,		
34	**1/3**	10.03.2016	Design of DC Machines: Output Equations of D.C machine	,,		

35	**2/3**	11.03.2016	Choice of specific magnetic loading	,,		
36	**3/3**	17.03.2016	Choice of specific electric loading	,,		
37	**4/3**	19.03.2016	Choice of No of poles	,,	Assignment –IV	
38	**5/3**	21.03.2016	Design of main dimensions and problems	,,		
39	**6/3**	22.03.2016	Problem	,,		
40	**7/3**	22.03.2016	Design of armature slot dimensions	,,		
41	**8/3**	23.03.2016	Problems on armature design	,,		
42	**9/3**	24.03.2016	Problems on armature design	,,		
43	**10/3**	29.03.2016	Design of commutator and brushes	,,		
44	**11/3**	30.03.2016	Magnetic circuit-estimation of ampere-turns, design of yoke and poles	,,		
45	**12/3**	31.03.2016	Magnetic circuit-estimation of ampere-turns, design of yoke and poles	,,		
46	**13/3**	31.03.2016	Numerical	,,		
47	**14/3**	01.04.2016	Field windings-shunt, series and and interpoles	,,		
48	**15/3**	02.04.2016	Field windings-shunt, series and and interpoles	,,		
49	**16/3**	05.04.2016	Numerical	,,		
50	**17/3**	06.04.2016	Numerical	,,		
51	**18/3**	07.04.2016	Numerical	,,		
52	**1/7&8**	07.04.2016	Design of synchronous machine design- O/P equation	,,		
53	**2/7&8**	11.04.2016	Choice of specific loadings	,,	Assignment -V	
54	**3/7&8**	12.04.2016	Short circuit ratio	,,		
55	**4/7&8**	15.04.2016	Design of main dimensions, Problem	,,		
56	**5/7&8**	16.04.2016	Armature slots and windings	,,		
57	**6/7&8**	18.04.2016	Slot dimension for stator of salient & non salient pole synchronous machine	,,		

58	**7/7&8**	18.04.2016	Problems on design of stator winding	,,		
59	**8/7&8**	20.04.2016	Design of rotor of salient pole synchronous machine	,,		
60	**9/7&8**	21.04.2016	Dimensions of the pole body Estimation of height and number of turns for field winding	,,		
61	**10/7&8**	23.04.2016	Numerical	,,		
62	**11/7&8**	28.04.2016	Design of rotor of non-salient pole machine	,,		
63		29.04.2016	Solution of question paper , Unit 3&4	,,		
64		29.04.2016	Solution of question paper , Unit 3&4	,,		
65		30.04.2016	Solution of question paper , Unit 3&4	,,		
66		02.05.2016	Solution of question paper ,: Unit :5&6	,,		
67		04.05.2016	Solution of question paper Unit :5&6	,,		
68		05.05.2016	Solution of question paper Unit :5&6	,,		
69		06.05.2016	Solution of question paper Unit :3	,,		
70		06.05.2016	Solution of question paper Unit :3	,,		
71		07.05.2016	Solution of question paper Unit :8	,,		
72		10.05.2016	Solution of question paper Unit :8	,,		

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CMR INSTITUTE OF TECHNOLOGY

Session wise – Course Plan

Department of Electrical and Electronics

SEMESTER	: VII	NAME OF THE FACULTY	: Saranya.S
BRANCH	: EEE	DATE OF COMMENCEMENT	: 27-1-2016
SUBJECT	: Computer Aided Electrical Drawing (CAED)	DATE OF CLOSING	: 21- 05-2016
SUBJECT CODE	: 10EE65	CLASS STRENGTH	: 60(A)/57(B)
NO OF HRS/WK	: 4	TOTAL HRS	: 48

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	**1/1a**	29/1/16	Developed winding diagrams of D.C. machines – Simplex, single and double layer, Lap windings, integral slot., progressive		ASSIGNMENT – 1 (PRE-REQUISITIES)	
2	**2/1a**	29/1/16	Developed winding diagrams of D.C. machines – Simplex, single and double layer, Lap windings, integral slot., retrogressive			
3	**3/1a**	2/2/16	Developed winding diagrams of D.C. machines –Duplex, single and double layer, Lap windings, integral slot., progressive			
4	**4/1a**	2/2/16	Developed winding diagrams of D.C. machines –Duplex, single and double layer, Lap windings, integral slot., retrogressive		ASSIGNMENT – 2	
5	**5/1a**	5/2/16	Developed winding diagrams of D.C. machines – Simplex, single and double layer, Lap windings, fractional slot., retrogressive			
6	**6/1a**	5/2/16	Developed winding diagrams of D.C. machines –Duplex, single and double layer, Lap windings, fractional slot duplex, progressive			
7	**7/1a**	10/2/16	Developed winding diagrams of D.C. machines – Simplex, single and double layer, wave windings, integral slot., progressive			

8	**8/1a**	10/2/16	Developed winding diagrams of D.C. machines – Simplex, single and double layer, wave windings, integral slot., retrogressive			
9	**9/1a**	13/2/16	Developed winding diagrams of D.C. machines –Duplex, single and double layer, wave windings, integral slot., progressive			
10	**10/1a**	13/2/16	Developed winding diagrams of D.C. machines –Duplex, single and double layer, wave windings, integral slot., retrogressive			
11	**11/1a**	17/2/16	Developed winding diagrams of D.C. machines – Simplex, single and double layer, wave windings, fractional slot., retrogressive			
12	**12/1a**	17/2/16	Developed winding diagrams of D.C. machines –Duplex, single and double layer, wave windings, fractional slot duplex, progressive			
13	**1/ 2**	23/2/16	Single line diagrams of generating stations			
14	**2/2**	23/2/16	Single line diagrams of generating stations		ASSIGNMENT -3	
15	**3/2**	26/2/16	Single line diagrams of substations			
16	**4/2**	26/2/16	Single line diagrams of substations			
17	**1/1b**	2/3/16	Integral slot double layer Lap windings			
18	**2/1b**	2/3/16	Integral slot double layer Lap windings			
19	**3/1b**	5/3/16	Fractional slot double layer Lap windings			
20	**4/1b**	5/3/16	Fractional slot double layer Lap windings		ASSIGNMENT -4	
21	**5/1b**	10/3/16	Integral slot double layer Wave windings			
22	**6/1b**	10/3/16	Fractional slot double layer Wave windings			
23	**7/1b**	18/3/16	Fractional slot double layer Wave windings			
24	**8/1b**	18/3/16	Single layer windings – Un-bifurcated 2 tier windings,			
25	**9/1b**	22/3/16	Single layer windings – Un-bifurcated 3 tier windings,			
26	**10/1b**	22/3/16	Single layer windings –bifurcated 2 tier windings,			
27	**11/1b**	28/3/16	Single layer windings –bifurcated 3 tier windings,			
28	**12/1b**	28/3/16	Single layer windings- mush windings			

29	**1/3a**	31/3/16	Transformers - sectional views of single phase core type Transformers			
30	**2 /3a**	31/3/16	Transformers - sectional views of single and core type Transformers		ASSIGNMENT – 5	
31	**3/3a**	4/4/16	Transformers - sectional views of single phase shell type Transformers			
32	**4/3a**	4/4/16	Transformers - sectional views of single phase shell type Transformers			
33	**5/3a**	7/4/16	Transformers - sectional views of single phase core type Transformers with winding details			
34	**6/3a**	7/4/16	Transformers - sectional views of single phase shell type Transformers with winding details			
35	**7/3a**	13/4/16	Transformers - sectional views of three phase core type Transformers with winding details			
36	**8/3a**	13/4/16	Transformers - sectional views of three phase core type Transformers			
37	**9/3a**	18/4/16	Transformers - sectional views of three phase shell type Transformers			
38	**1/3b**	18/4/16	Introduction to dc machine sectional views of each parts			
39	**2/3b**	22/4/16	D.C. machine - sectional views of yoke, field system (problems)		ASSIGNMENT - 6	
40	**3/3b**	22/4/16	D.C. machine - sectional views of yoke, field system, (problems)			
41	**4/3b**	29/4/16	D.C. machine - sectional views, armature Separately			
42	**5/3b**	29/4/16	D.C. machine - sectional views commutator dealt Separately			
43	**6/3b**	3/5/16	sectional views of Complete dc – machine with all parts			
44	**1/3c**	3/5/16	Alternator – sectional views of stator separately			
45	**2/3c**	6/5/16	Alternator – sectional views of stator dealt separately			
46	**3/3c**	6/5/16	Alternator – sectional views of rotor dealt separately		ASSIGNMENT – 7	
47	**4/3c**	11/5/16	Alternator – sectional views of rotor dealt separately			
48	**5/3c**	11/5/16	sectional views of Complete alternator with all the parts			

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CMR INSTITUTE OF TECHNOLOGY

Session wise – Course Plan

Department of Electrical & Electronics Engineering

SEMESTER : VI
BRANCH : EEE
SUBJECT : Embedded Systems
SUBJECT CODE : 10EE665
NO OF HRS/ WK : 5

NAME OF THE FACULTY : Ms. Shilpa S. Uttarkar
DATE OF COMMENCEMENT : 27.01.2016
DATE OF CLOSING : 21.05.2016
CLASS STRENGTH : 39
TOTAL HRS : 60

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 & 2 TB1**	27-1-16	Unit-1& 2: **Concept of Embedded System Design**	Board, chalk, duster	Assignment- 0	
2.	**2/ 1 & 2 TB1**	28-1-16	Components			
3.	**3/ 1 & 2 TB1**	28-1-16	Classification			
4.	**4/ 1 & 2 TB1**	30-1-16	Skills required			
5.	**5/ 1 & 2 TB1**	1-2-16	Embedded Micro controller cores Architecture of 6808	,,		
6.	**6/ 1 & 2 TB1**	4-2-16	Architecture of 6811	,,	Assignment- I & II	
7.	**7/ 1 & 2 RB2**	4-2-16	Embedded Memories	,,		
8.	**8/ 1 & 2 RB2**	8-2-16	Variants of ROM	,,		
9.	**9/ 1 & 2 RB2**	9-2-16	Variants of RAM and ROM read timing diagram.			
10.	**10 /1&2**	11-2-16	SOC for cord-less bar code scanner.			
11.	**11/ 1&2**	12-2-16	Revision & Unit Test.			
12.	**1/3**	12-2-16	**Unit -3: Technological Aspects of Embedded system** Interfacing between analog and digital blocks	,,		

13.	**2/3**	15-2-16	Signal conditioning, Digital signal processing.	Board, chalk, duster		
14.	**3/3**	16-2-16	DAC interfacing	,,		
15.	**4/3**		DAC interfacing	,,	Assignment -III	
16.	**5/3**	18-2-16	ADC interfacing	,,		
17.	**6/3**	22-2-16	ADC interfacing			
18.	**7/3**	22-2-16	Sample & hold	,,		
19.	**8/3**	24-2-16	Analog multiplexer interface			
20.	**9/3**	25-2-16	Internal ADC interfacing	,,		
21.	**10/3**	29-2-16	Data Acquisition System	,,		
22.	**11/3**	1-3-16	Signal conditioning using DSP	,,		
23.	**12/3**	3-3-16	Revision & Unit Test			
24.	**1/4**	4-3-16	**UNIT 4:** **Design tradeoffs due to process incompatibility, thermal considerations** Issues in embedded system design.			
25.	**2/4**	8-3-16	Design challenge			
26.	**3/ 4**	9-3-16	Design Metrics			
27.	**4/ 4**	9-3-16	Processor technology and IC technology.			
28.	**5/4**	11-3-16	Design technology		Assignment –IV	
29.	**6/4**	19-3-16	Tradeoffs	,,		
30.	**7/4**	21-3-16	Thermal considerations.			
31.	**8/4**	21-3-16	Revision & Unit Test			
32.	**1/5 &6**	23-3-16	**UNIT 5& 6:** Software aspects of Embedded Systems, Real time programming Languages.	,,		
33.	**2/5 &6**	29-3-16	Operating systems.	,,		
34.	**3/5 &6**	30-3-16	Software Programming in Assembly Language and in High Level language.	,,	Assignment –V & VI	
35.	**4/5 &6**	30-3-16	C Program Elements.	,,		
36.	**5/5 &6**	1-4-16	Program Elements: macros and Functions.			

37.	**6/5 &6**	2-4-16	Program Elements: Data types, Structures, Loops and Pointers.	Board, chalk, duster		
38.	**7/5 &6**	5-4-16	Modifiers, Re-entrant function.	,,		
39.	**8/5 &6**	6-4-16	Queues, Stacks, Lists.	,,		
40.	**9/5 &6**	6-4-16	Survey of Software Architectures.	,,		
41.	**10/5 &6**	11-4-16	Round Robin with Interrupts.	,,		
42.	**11/5 &6**	12-4-16	Function Queue Scheduling.			
43.	**12/5 &6**	15-4-16	RTOS Architecture			
44.	**13/5&6**	16-4-16	Selecting the Architecture. Introduction to RTOS.			
45.	**14/5&6**	16-4-16	Tasks and Task States	,,		
46.	**15/5&6**	20-4-16	Scheduling algorithms Tasks and data.	,,		
47.	**16/5&6**	21-4-16	Shared data problems	,,		
48.	**17/5&6**	23-4-16	Semaphores and Shared data	,,	Assignment – VII & VIII	
49.	**18/5&6**	16-4-16	Semaphore problems.	Board, chalk, duster		
50.	**19/5&6**	20-4-16	Ways to protect shared data.	,,		
51.	**20/5&6**	21-4-16	Revision and Unit test	,,		
52.	**1/7&8**	23-4-16	**UNIT 7 & 8:** Subsystem interfacing with external systems user interfacing,	,,		
53.	**2/7&8**	28-4-16	Serial I/O devices	,,		
54.	**3/7&8**	28-4-16	Serial I/O devices	,,		
55.	**4/7&8**	30-4-16	Parallel port interfaces: Input switches	,,		
56.	**5/7&8**	2-5-16	Parallel port interfaces: Key boards	,,	Assignment – VII & VIII	
57.	**6/7&8**	4-5-16	Memory interfacing.	Board, chalk, duster		
58.	**7/7&8**	5-5-16	**Case study:** Embedded velocity PID controller, PI controller with a PWM actuator.	,,		
59.	**7/7&8**	7-5-16	**Case study:** Embedded velocity PID controller, PI controller with a PWM actuator.	,,		
60.	**8/7&8**	10-5-16	Revision & Unit Test	,,		

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CMR INSTITUTE OF TECHNOLOGY

Session wise – Course Plan

Department of Electrical & Electronics Engineering

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SEMESTER : VI
BRANCH : EEE
SUBJECT : EEM
SUBJECT CODE : 10EE666
NO OF HRS/ WK : 5

NAME OF THE FACULTY : Ms. Reema Mohanty
DATE OF COMMENCEMENT : 27.01.2016
DATE OF CLOSING : 21.05.2016

TOTAL HRS : 57

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**	27-1-16	**UNIT 1** Review of metallic conduction on the basis of free electron theory.	Board, chalk, duster	Assignment- 0	
2	**2/ 1**	28-1-16	Fermi-Dirac distribution – variation of conductivity with temperature and composition	,,		
3	**3/ 1**	28-1-16	materials for electric resistors- general electric properties	,,	Assignment- I & II	
4	**4/ 1**	1-2-16	properties; material for brushes of electrical machines	,,		
5	**5/ 1**	1-2-16	lamp filaments, fuses and solder	,,		
6	**6/1**	3-2-16	**Unit test**			
7	**1/ 2**	4-2-16	**UNIT 2 SEMICONDUCTORS:** Mechanism of conduction in semiconductors, density of carriers in intrinsic semiconductors.			
8	**2/ 2**	4-2-16	Semiconductors, the energy gap, types of			

			semiconductors			
9	**3/2**	8-2-16	Hall effect, compound semiconductors,	,,		
10	**4/2**	8-2-16	Basic ideas of amorphous Semiconductors.	Board, chalk, duster	Assignment -III	
11	**5 /2**	11-2-16	Organic semiconductors	,,		
12	**6/2**	12-2-16	**Magnetic materials**: Classification of magnetic materials	,,		
13	**7/2**	12-2-16	Origin of permanent magnetic dipoles	,,		
14	**8/2**	16-2-16	Ferromagnetism			
15	**9/2**	16-2-16	hard and soft magnetic materials	,,		
16	**10/2**	18-2-16	Magneto materials used in electrical machines	,,		
17	**11/2**	22-2-16	Instruments and relays.	,,		
18	**12/2**	22-2-16	Revision			
19	**13/2**	25-2-16	Unit Test			
20	**1/3**	29-2-16	**UNIT – 3** **DIELECTRICS:** Dielectric, polarization under static fields- electronic ionic and dipolar polarizations			
21	**2/3**	1-3-16	behavior of dielectrics in alternating fields, Factors influencing dielectric strength and capacitor materials			
22	**3/3**	1-3-16	Insulating materials, complex dielectric constant, dipolar relaxation and dielectric loss.		Assignment III	
23	**4/3**	4-3-16	Revision	,,		
24	**5/3**	4-3-16	Unit Test			
25	**1/4**	8-3-16	**UNIT – 4** **INSULATING MATERIALS:** Inorganic materials (mica, glass, porcelain, asbestos), organic materials (paper, rubber, cotton silk fiber, wood, plastics and bakelite),			
26	**2/4**	9-3-16	Discussion on resins and varnishes, liquid insulators.	"		
27	**3/4**	9-3-16	Gaseous insulators (air,SF6 and nitrogen) and ageing of insulators	,,		

					Assignment IV	
28	**4/5**	17-3-16	Revision	,,		
29	**5/4**	19-3-16	unit test	,,		
30	**1/5**	19-3-16	**UNIT – 5** **MATERIALS FOR SPECIAL APPLICATIONS:** Materials for solar cells, fuel cells and battery.	,,		
31	**2/5**	21-3-16	Materials for coatings for enhanced solar thermal energy collection and solar selective coatings. .			
32	**3/5**	24-3-16	Cold mirror coatings, heat mirror coatings, antireflection coatings, sintered alloys for breaker and switch contacts.	Board, chalk, duster	Assignment -V	
33	**4/5**	24-3-16	Revision	,,		
34	**5/5**	29-3-16	unit test	,,		
35	**1/6**	30-3-16	**UNIT – 6** **MODERN TECHNIQUES FOR MATERIALS STUDIES:** Optical microscopy, Electron microscopy	,,		
36	**2/6**	30-3-16	Photo electron spectroscopy, Atomic absorption spectroscopy, magnetic resonance.	,,		
37	**3/6**	2-4-16	Nuclear magnetic resonance, electron spin resonance and ferromagnetic resonance			
38	**4/6**	2-4-16	Revision			
39	**5/6**	5-4-16	Unit test			

40	**1/7**	6-4-16	**UNIT – 7 & 8** Introduction Properties and Application of Piezoelectric materials, Eletrostrictive materials, Ferromagnetic materials.	,,		
41	**1/7**	6-4-16	Magnetostrictive materials, Shape memory alloys, Electro archeological fluids.	,,		
42	**2/7**	12-4-16	Magneto archeological fluids, Smart hydrogels.	,,		
43	**3/7**	12-4-16	**Ceramics:** properties, application to conductors, insulators & capacitors.	,,	Assignm	

					ent – VII & VIII	
44	**4/7**	15-4-16	**Plastics:** Thermoplastics, rubber, thermostats, properties.	Board,		
				chalk, duster		
45	**5/7**	16-4-16	Revision	,,		
46	**6/7&8**	16-4-16	Unit Test	,,		
47	**7/7&8**	21-4-16	Revision	,,		
48	**8/7&8**	21-4-16	Revision	,,		
49	**9/7&8**	23-4-16	Revision	,,		
50	**10/7&8**	28-4-16	Unit Test			
51	**1**	28-4-16	Revision	,,		
52	**2**	2-5-16	Revision	,,		
53	**3**	4-5-16	Revision	,,	Preparato ry Test	
54	**4**	5-5-16	Revision	,,		
55	**5**	5-5-16	Revision	,,		
56	**6**	10-5-16	Revision	,,		
57	**7**	10-5-16	Revision	,,		

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CMR INSTITUTE OF TECHNOLOGY

Session wise – Course Plan

Department of Electrical and Electronics

SEMESTER	:VI	NAME OF THE FACULTY	:Mrs. Alka
BRANCH	:EEE	DATE OF	:27.01.2016
SUBJECT	:Digital Signal Processing	DATE OF CLOSING	:21.05.2016
SUBJECT	:10EE64	CLASS STRENGTH	:
NO OF HRS/WK	:6	TOTAL HRS	:76

Session No	Chapter no (No of hrs planed for the chapter)	DATE	Topics planned for the session	Teaching Aids	Assignments/ Tests planned for the chap	Topics covered As per plan
1	1/0	27/01	Review of Signals and Systems.	Board,	A1	
2	2/0	27/01	Review of Signals and Systems, Peri-	,,		
3	3/0	28/01	Properties of systems.	,,		
4	4/0	29/01	Convolution.	,,		
5	5/0	29/01	Problems on convolution.	,,		
6	6/0	30/01	Complex exponential as Eigen Func-	,,		
7	7/0	30/01	Introduction to Fourier Representa-	,,		
8	8/0	01/02	Fourier Transform.	,,		
9	9/0	01/02	DTFS.	,,		
10	10/0	02/02	DTFT.	,,		
11	1/1 and 2	02/02	Frequency domain sampling, DFT.	,,	A2	
12	2/1 and 2	03/02	Parseval's theorem and Problems on	,,		
13	3/1 and 2	05/02	DFT as linear transformation, some	,,		
14	4/1 and 2	08/02	Properties of DFT.	,,		
15	5/1 and 2	09/02	Problems on DFT.	,,		
16	6/1 and 2	10/02	Circular Symmetries of a sequence,	,,		
17	7/1 and 2	10/02	Circular Convolution, problem solv- ing methods- Use of tabular	,,	A3	
18	8/1 and 2	11/02	Circular Convolution, problem solv- ing methods- Stock hams's	,,		
19	9/1 and 2	13/02	Additional properties of DFT and	,,		

Session No	Chapter no (No of hrs planed for the chapter)	DATE	Topics planned for the session	Teaching Aids	Assignments/ Tests planned for the chap	Topics covered As per plan
20	10 /1 and 2	15/02	Additional properties of DFT and	Board, chalk,duster		
21	11/1 and 2	16/02	Generalized Parseval's theorem, linear convolution using circular	,,		
22	12 /1 and 2	17/02	Linear Convolution-Problems.	,,		
23	13/1 and 2	17/02	Filtering of long data sequences, over-	,,		
24	14/1 and 2	18/02	Overlap save method, problem.	,,		
25	1/3 and 4	23/02	Introduction to FFT algorithms.	,,	A4	
26	2/3and 4	24/02	Derivation of DIT FFT algorithm, Computational complexity of	,,		
27	3/3 and 4	25/02	Radix 2 DIT FFT algorithm.	,,		
28	4/3and 4	26/02	Problems on DIT FFT algorithm.	,,		
29	5/3 and 4	26/02	Problems on DIT FFT algorithm.	,,		
30	6/3and 4	29/02	Derivation of DIF FFT algorithm, Computational complexity of	,,		
31	7/3 and 4	2/03	Radix 2 DIF FFT algorithm.	,,		
32	8/3and 4	3/03	Problems on DIF FFT algorithm.	,,		
33	9/3 and 4	4/03	Derivation of inverse DIT FFT algo-	,,	A5	
34	10/3and 4	5/03	Radix 2 inverse DIT FFT	,,		
35	11/3 and 4	5/03	Derivation of inverse DIF FFT algo-	,,		
36	12/3and 4	8/03	Radix 2 inverse DIF FFT	,,		
37	13/3 and 4	10/03	Problems on Circular and linear con-	,,		
38	14/3and 4	11/03	DIT FFT algorithm for composite	,,		
39	15/3 and 4	17/03	Computing DFT for $N = 9$ and $N =$	,,		
40	16/3and 4	18/03	Radix 3 DIF FFT algorithm.	,,		
41	1/8	18/03	Realization of Digital system - Block diagram and Signal flow	,,	A6	
42	2/8	19/03	Direct form II and Cascade Form re-	,,		
43	3/8	22/03	Parallel Form realization of IIR sys-	,,		
44	4/8	23/03	Direct form, Cascade Form and Lin-	,,		
45	5/8	24/03	Lattice structure realization of FIR fil-	,,		

Session No	Chapter no (No of hrs planed for the chapter)	DATE	Topics planned for the session	Teaching Aids	Assignments/ Tests planned for the chap	Topics covered As per plan
46	6/8	28/03	Lattice ladder structure realization of	Board, chalk,duster		
47	1/7	28/03	Impulse response of ideal filters.	„	A7	
48	2/7	29/03	Basics of filter design, impulse re-	„		
49	3/7	31/03	Relationship between real and imag- inary parts of frequency	„		
50	4/7	01/04	FIR filters, linear phase, different	„		
51	5/7	02/04	Different types of FIR filters, z trans-	„		
52	6/7	04/04	FIR filter design using windows.	„		
53	7/7	04/04	Problems on Low Pass FIR filter de-	„		
54	8/7	05/04	Problems on High Pass FIR filter de-	„		
55	9/7	07/04	Problems on Band Pass FIR filter de-	„		
56	10/7	11/04	FIR filter design using frequency sam-	„		
57	1/5 and 6	12/04	IIR filter design, laplace transform, z	„	A8	
58	2/5 and 6	13/04	Introduction to IIR filter design from	„		
59	3/5 and 6	13/04	Properties of mapping functions. In- troduction to IIR filter design	„		
60	4/5 and 6	15/04	Problems on impulse invariance method.	„		
61	5/5 and 6	18/04	Bilinear Transformation.	„		
62	6/5 and 6	20/04	Problems on Bilinear	„		
63	7/5 and 6	21/04	Butterworth filter design-	„	A9	
64	8/5 and 6	22/04	Butterworth filter design-	„		
65	9/5 and 6	22/04	Problems on analog butterworth filter	„		
66	10/5 and 6	23/04	Problems on digital butterworth filter	„		
67	11/5 and 6	29/04	Problems on butterworth filter	„		
68	12/5 and 6	30/04	Frequency transformations.	„		
69	13/5 and 6	02/05	Chebyshev Filter Design-	„		
70	14/5 and 6	03/05	Chebyshev Filter Design-	„		
71	15/5 and 6	03/05	Problems on analog Chebyshev Filter	„		

Session No	Chapter no (No of hrs planed for the chapter)	DATE	Topics planned for the session	Teaching Aids	Assignments/ Tests planned for the chap	Topics covered As per plan
72	16/5 and 6	04/05	Problems on digital Chebyshev Filter	Board, chalk,duster		
73		06/05	Revision-Unit 1 and 2.	,,		
74		07/05	Revision-Unit 3 and 4.	,,		
75		10/05	Revision-Unit 7 and 8.	,,		
76		11/05	Revision-Unit 5 and 6.	,,		