Operational Research

CMR
INSTITUTE
OF TECHNOLOGY

Session wise – Course Plan

Department of Electrical and Electronics Engg.

Semester	: VI	Name of The Faculty	: Mr. Anup H
Branch	: EEE	Date of commencement	:
Subject	: OR	Date of closing	:
Subject	: 10EE661	Class strength	:
		No. of hours/week	: 5
		Total hours	: 58

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	15/2/17	Introduction to Operations research, Origin nature and impact of operations research.	PPT		
2.	2/1	15/2/17	Concept of Linear Programming Model, Assumptions in Linear Programming, Properties of Linear Programming solutions. Problem Solving	Board, chalk, dust		
3.	3/1	16/2/17	Mathematical formulations in LPP- problem solving	Board, chalk		
4.	4/1	17/2/17	Mathematical formulations in LPP- problem solving	Board, chalk	Assignment on Linear Programming	
5.	5/1	18/2/17	Graphical solution, Computational Procedure for simplex method and Big M method	Board, chalk		
6.	6/1	22/2/17	Simplex Method and Big M method.	Board, chalk		
7.	7/1	22/2/17	Big M method and Two phase simplex method	Board, chalk	Assignment of Unit 1	
8.	8/1	23/2/17	Two phase Simplex method	Board, chalk		
9.	1/2	27/2/17	Special Cases and Degeneracy	Board, chalk		

10.	2/2	28/2/2017	Degeneracy and alternative optimal solutions	Board, chalk		
11.	3/2	6/3/2017	Non existing solutions and Duality in LPP	Board, chalk		
12.	4/2	6/3/2017	Duality in LPP, Primal Dual relation	Board, chalk		
13.	6/2	7/3/2017	Formulation of Dual Problem	Board, chalk		
14.	7/2	8/3/2017	Primal dual optimal solution and limitations of LPP	Board, chalk	Assignment of Unit-2	
15.	1/3	9/3/2017	Revised Simplex Method	Board, chalk		
16.	2/3	13/3/2017	Revised Simplex Method and Dual Simplex Method	Board, chalk		
17.	3/3	13/3/2017	Dual Simplex Method	Board, chalk		
18.	4/3	14/3/2017	Parametric Programming	Board, chalk	Assignment of Unit-3	
19.	1/4	15/3/2017	Assignment Problems	Board, chalk		
20.	2/4	16/3/2017	Assignment Problems	Board, chalk	Assignment of Assignment Problems	
21.	3/4	20/3/2017	Hungarian Method of Problem Solving	Board, chalk		
22.	4/4	20/3/2017	Hungarian Method of Problem Solving	Board, chalk	Assignment of Hungarian Method	
23.	5/4	21/3/2017	Travelling Salesman Problem	Board, chalk		
24.	6/4	22/3/2017	Travelling Salesman Problem	Board, chalk		
25.	7/4	23/3/2017	Travelling Salesman Problem	Board, chalk	Assignment of Travelling Salesman Problem	
26.	1/5	1/4/2017	Basic Feasible Solution	Board, chalk		
27.	2/5	1/4/2017	Basic Feasible Solution	Board, chalk, duste		

28.	3/5	3/4/2017	MODI method	Board, chalk, duste		
29.	4/5	4/4/2017	MODI method	Board, chalk, duste		
30.	5/5	5/4/2017	MODI method	Board, chalk, duste	Assignment of MODI method	
31.	6/5	8/4/2017	Degeneracy	Board, chalk, duste	Assignment of Unit-5	
32.	7/5	8/4/2017	Degeneracy	Board, chalk, duste		
33.	1/7	10/4/2017	Network Construction	Board, chalk, duste		
34.	2/7	11/4/2017	Network Construction	Board, chalk, duste		
35.	3/7	12/4/2017	Constructing Critical Path	Board, chalk, duste	Assignment on PERT & CPM	
36.	4/7	18/4/2017	Floats, Scheduling by network	Board, chalk, duste		
37.	5/7	18/4/2017	Scheduling by network	Board, chalk, duste		
38.	6/7	19/4/2017	Project duration	Board, chalk, duste		
39.	7/7	20/4/2017	Prediction of date of completion	Board, chalk, duste		
40.	8/7	21/4/2017	Crashing of network	Board, chalk, duste		
41.	9/7	25/4/2017	Crashing of network	Board, chalk,		
42.	10/7	25/4/2017	Resource Leveling by Network Techniques			
43.	11/7	26/4/2017	Resource Leveling by Network Techniques	Board, chalk	Assignment of Unit 7	
44.	1/8	27/4/2017	Replacement Theory	Board, chalk		

45.	2/8	28/4/2017	Economic Life of equipments	Board, chalk		
46.	3/8	4/5/2017	Replacement considering both the cases with and without tie value of money	Board, chalk		
47.	1/6	4/5/2017	Introduction to Optimal Strategies	Board, chalk		
48.	2/6	5/5/2017	Solution of 2x2 games	Board, chalk		
49.	3/6	11/5/2017	Solution of 2xn games	Board, chalk		
50.	4/6	12/5/2017	Solution of mx2 games	Board, chalk		
51.	5/6	16/5/2017	Sequencing Problems	Board, chalk		
52.	6/6	16/5/2017	n-jobs, 1 machine	Board, chalk		
53.	7/6	17/5/2017	N jobs, 2 machines	Board, chalk		
54.	8/6	18/5/2017	N jobs and three machines	Board, chalk		
55.	9/6	19/5/2017	Two jobs and m machines	Board, chalk		
56.	10/6	23/5/2017	Two jobs and m machines	Board, chalk		
57.	11/6	23/5/2017	N jobs and m machines	Board, chalk		
58.	12/6	24/5/2017	N jobs and m machines	Board, chalk		

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CMR INSTITUTE

OF TECHNOLOGY

Session wise – Course Plan

Department of Electrical and Electronics Engg

SEMESTER : VI

NAME OF THE FACULTY : Jagadish Ku Patra

BRANCH : EEE

DATE OF COMMENCEMENT: 13.02.17

SUBJECT : SGP

DATE OF CLOSING :

SUBJECT CODE: 10EE62

CLASS STRENGTH : 126

NO OF HRS/WK : 5

TOTAL HOURS : 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**	13.02.17	Introduction, energy management of power system, definition of switchgear, switches - isolating, load breaking and earthing.	Board, chalk, duster		
2	**1/2**	14.02.17	Introduction to fuse**,** fuse law, cut -off characteristics,:	,,		
3	**1/3**	15.02.17	Time current characteristics, fuse material	,,	Assignment- I	
4	**1/4**	18.02.17	HRC fuse, liquid fuse, Application of fuse.	,,		
5	**1/5**	18.02.17	Solution of question paper Unit :1	,,		
6	1/6	20.02.17	Discussion	,,		
7	**2/1**	21.02.17	Introduction, requirement of a circuit breakers	,,	Assignment -II	

8	**2/2**	22.02.17	Difference between an isolator and circuit breaker, basic principle of operation of a circuit breaker	,,		
9	**2/3**	28.02.17	Phenomena of arc, properties of arc, initiation and maintenance of arc	,,		
10	**2/4**	28.02.17	Arc interruption theories - slepian's theory and energy balance theory**,**	,,		
11	**2/5**	01.03.17	Restriking voltage, recovery voltage,	,,		
12	**2/6**	02.03.17	Rate of rise of Restriking voltage, DC circuit breaking	,,		
13	**2/7**	06.03.17	AC circuit breaking, current chopping	,,		
14	**2/8**	09.03.17	Capacitance switching, resistance switching,	,,		
15	**2/9**	09.03.17	Rating of Circuit breakers	,,		
16	**2/10**	10.03.17	Problems	,,		
17	**2/11**	11.03.17	Problems	,,		
18	**3&4/1**	13.03.17	Air Circuit breakers – Air break and Air blast Circuit breakers	,,		
19	**3&4/2**	16.03.17	Oil Circuit breakers - Single break, double break,	,,		
20	**3&4/3**	16.03.17	Minimum OCB	,,		
21	**3&4/4**	17.03.17	SF_6 breaker - Preparation of SF_6 gas, Puffer and non Puffer type of SF_6 breakers	,,	Assignment –III	
22	**3&4/5**	18.03.17	SF_6 breaker - Preparation of SF_6 gas, Puffer and non Puffer type	,,		

			of SF_6 breakers			
23	**3&4/6**	20.03.17	Vacuum circuit breakers - principle of operation and constructional details.	,,		
24	**3&4/7**	23.03.17	Advantages and disadvantages of different types of Circuit breakers	,,		
25	**3&4/8**	23.03.17	Testing of Circuit breakers, Unit testing, synthetic testing, substitution test,	,,		
26	**3&4/9**	24.03.17	Compensation test and capacitance test.	,,		
27	**3&4/10**	31.03.17	Causes of over voltages – internal and external, lightning	,,	Assignment –IV	
28	**3&4/11**	01.04.17	Working principle of different types of lightning arresters, Shield wires.	,,		
29	**3&4/12**	05.04.17	Problem	,,		
30	**3&4/13**	05.04.17	Solution of question paper Unit :3	,,		
31	**3&4/14**	06.04.17	Solution of question paper Unit :4	,,		
32	**5/1**	07.04.17	Requirement of Protective Relaying, Zones of protection	,,		
33	**5/2**	08.04.17	Primary and backup protection	,,		
34	**5/3**	12.04.17	Essential qualities of Protective Relaying	,,		
35	**5/4**	12.04.17	Classification of Protective Relays	,,		
36	**5/5**	13.04.17	Discussion	,,	Assignment -V	
37	**6/1**	17.04.17	Non-directional and directional over current relays	,,		

38	**6/2**	18.04.17	IDMT and Directional characteristics	,,		
39	**6/3**	21.04.17	Differential relay – Principle of operation, percentage differential relay	,,		
40	**6/4**	21.04.17	Bias characteristics, distance relay	,,		
41	**6/5**	22.04.17	Three stepped distance protection	,,		
42	**6/6**	24.04.17	Impedance relay, Reactance relay	,,		
43	**6/7**	25.04.17	Mho relay	,,		
44	**6/8**	28.04.17	Buchholz relay, Negative Sequence relay	,,		
45	**6/9**	02.05.17	Microprocessor based over current relay – block diagram approach	,,		
46	**6/10**	03.05.17	Problem	,,		
47	**6/11**	04.05.17	Problem	,,	Assignment -VI	
48	**6/12**	12.05.17	Solution of question paper ,: Unit :5&6	,,		
49	**7&8/1**	12.05.17	Generator Protection - Merz price protection,	,,		
50	**7&8/2**	13.05.17	Prime mover faults, stator and rotor faults	,,		
51	**7&8/3**	15.05.17	Prime mover faults, stator and rotor faults	,,		
52	**7&8/4**	16.05.17	Protection against abnormal conditions – unbalanced loading, loss of excitation, over	,,		

			speeding.			
53	**7&8/5**	19.05.17	Transformer Protection - Differential protection,	,,		
54	**7&8/6**	19.05.17	Differential relay with harmonic restraint, Inter turn faults Induction motor protection	,,		
55	**7&8/7**	20.05.17	Protection against electrical faults such as phase fault	,,		
56	**7&8/8**	22.05.17	Ground fault, and abnormal operating conditions such as single phasing	,,		
57	**7&8/9**	23.05.17	Phase reversal, over load.	,,		

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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
DATE OF COMMENCEMENT : 13.02.201
DATE OF CLOSING : 02.06.201
CLASS STRENGTH : 124
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	Topics covered
1	**1/1**	13.02.2017	Considerations of Electrical Machine Design, limitations	Board, chal	Prerequisite Assignment	
2	**2/1**	13.02.2017	Different types of materials used in electrical machines	,,		
3	**1/3&4**	16.02.2017	Design of single phase and three phase transformer :Output equation Output equation for single and three phase transformer .	,,	Assignment- I	
4	**2/3&4**	17.02.2017	Expression for volt/turn,	,,		
5	**3/3&4**	18.02.2017	Determination of main dimensions	,,		
6	**4/3&4**	18.02.2017	Determination of main dimensions	,,		
7	**5/3&4**	20.02.2017	Estimation of number of turns and cross sectional area of conductors	,,		
8	**6/3&4**	20.02.2017	Problems on main dimensions	,,		
9	**7/3&4**	23.02.2017	Problems on main dimensions	,,	Assignment -II	
10	**8/3&4**	27.02.2017	Problems on main dimensions	,,		
11	**9/3&4**	28.02.2017	Estimation of no load current	,,		
12	**10/3&4**	28.02.2017	Problems on calculation of no load current	,,		
13	**11/3&4**	01.03.2017	Expression for leakage reactance and voltage regulation	,,		
14	**12/3&4**	01.03.2017	Problems	,,		
15	**13/3&4**	07.03.2017	Tank design Calculation of no of cooling tubes Problems on design of	,,		
16	**1/5&6**	08.03.2017	Design of induction motor: Output equation	,,		
17	**2/5&6**	09.03.2017	Choice of specific magnetic loadings	,,		
18	**3/5&6**	09.03.2017	Choice of specific electric loadings	,,		
19	**4/5&6**	10.03.2017	Main dimensions of 3 phase induction motor	,,		
20	**5/5&6**	10.03.2017	Stator winding design	,,		

21	**6/5&6**	14.03.2017	Choice of airgap length	,,	Assignment – III	
22	**7/5&6**	15.03.2017	Problems on stator design	,,		
23	**8/5&6**	16.03.2017	Problems on stator design	,,		
24	**9/5&6**	16.03.2017	Estimation of no of slots for for squirrel cage rotor	,,		
25	**10/5&6**	17.03.2017	Design of rotor bars and end rings	,,		
26	**11/5&6**	17.03.2017	Design of rotor bars and end rings	,,		
27	**12/5&6**	21.03.2017	Problems on squirrel cage rotor design	,,		
28	**13/5&6**	22.03.2017	Design of slip ring induction motor	,,		
29	**14/5&6**	23.03.2017	Design of slip ring induction motor	,,		
30	**15/5&6**	23.03.2017	Numerical	,,		
31	**16/5&6**	24.03.2017	Numerical	,,		
32	**17/5&6**	24.03.2017	Estimation of no load current	,,		
33	**18/5&6**	03.04.2017	Estimation of leakage reactance, circle diagram	,,		
34	**1/7&8**	04.04.2017	Design of synchronous machine design- O/P equation	,,		
35	**2/7&8**	05.04.2017	Choice of specific loadings	,,		
36	**3/7&8**	05.04.2017	Short circuit ratio	,,		
37	**4/7&8**	06.04.2017	Design of main dimensions, Problem	,,		
38	**5/7&8**	06.04.2017	Armature slots and windings	,,		
39	**6/7&8**	10.04.2017	Slot dimension for stator of salient & non salient pole synchronous machine	,,	Assignment – IV	
40	**7/7&8**	11.04.2017	Problems on design of stator winding	,,		
41	**8/7&8**	12.04.2017	Design of rotor of salient pole synchronous machine	,,		
42	**9/7&8**	12.04.2017	Dimensions of the pole body Estimation of height and number of turns for field winding	,,		

43	**10/7&8**	13.04.2017	Numerical	,,		
44	**11/7&8**	13.04.2017	Design of rotor of non-salient pole machine	,,		
45	**1/2**	19.04.2017	Design of DC Machines: Output Equations of D.C machine	,,		
46	**2/2**	20.04.2017	Choice of specific magnetic loading	,,		
47	**3/2**	21.04.2017	Choice of specific electric loading	,,		
48	**4/2**	21.04.2017	Choice of No of poles	,,		
49	**5/2**	22.04.2017	Design of main dimensions and problems	,,		
50	**6/2**	22.04.2017	Problem	,,		
51	**7/2**	26.04.2017	Design of armature slot dimensions	,,		
52	**8/2**	27.04.2017	Problems on armature design	,,		
53	**9/2**	28.04.2017	Problems on armature design	,,	Assignment -V	
54	**10/2**	28.04.2017	Design of commutator and brushes	,,		
55	**11/2**	02.05.2017	Magnetic circuit-estimation of ampere-turns, design of yoke and poles	,,		
56	**12/2**	02.05.2017	Magnetic circuit-estimation of ampere-turns, design of yoke and poles	,,		
57	**13/2**	02.05.2017	Numerical	,,		
58	**14/2**	05.05.2017	Field windings-shunt, series and and interpoles	,,		
59	**15/2**	11.05.2017	Field windings-shunt, series and and interpoles	,,		
60	**16/2**	12.05.2017	Numerical	,,		
61	**17/2**	12.05.2017	Numerical	,,		
62	**18/2**	13.05.2017	Numerical	,,		
63		13.05.2017	Solution of question paper , Unit 3&4	,,		
64		17.05.2017	Solution of question paper , Unit 3&4	,,		
65		18.05.2017	Solution of question paper ,: Unit :5&6	,,		
66		19.05.2017	Solution of question paper Unit :5&6	,,		
67		19.05.2017	Solution of question paper ,: Unit :7&8	,,		
68		20.05.2017	Solution of question paper Unit :7&8	,,		
69		20.05.2017	Solution of question paper Unit :3	,,		

70		24.05.2017	Solution of question paper Unit :3	,,		

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CMR INSTITUTE

OF TECHNOLOGY

Session wise – Course Plan

Department of Computer Science and Engineering

SEMESTER : VI NAME OF THE FACULTY : POONAM TIJARE

BRANCH : EC/TC DATE OF COMMENCEMENT: 27 JAN 2017

SUBJECT : OBJECT ORIENTED PROGRAMMING USING C ++ DATE OF CLOSING : 11 MAY 2017

SUBJECT CODE : 10EE664

CLASS STRENGTH : 27

NO OF HRS/WK : 5 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		14/02/2017	Discussing Prerequisites Review of Functions Simple C and C++ Programs	Chalk & Talk		

2		15/02/2017	Simple C and C++ Programs cont..	,,		
3		15/02/2017	Simple C and C++ Programs cont..			
4	**1/4**	16/02/2017	UNIT – 1 : Review of Procedure Oriented Programming, Basic concepts of Object Oriented Programming – Object, Class,	,,		
5	**2/4**	17/02/2017	Encapsulation, Inheritance, Polymorphism; Benefits of OOPs, Applications of OOP's.	,,		
6	**3/4**	18/02/2017	Revision on unit 1	,,		
7	**1/6**	22/02/2017	UNIT – 2: A comparison of C and C++, Structure of C++ program with Class,		Assign ment- I	
8	**2/6**	23/02/2017	Preprocessor directives,	,,		
9	**3/6**	23/02/2017	C++ Statements – Input/output, Comments, Tokens,	,,		
10	**4/6**	27/02/2017	Keywords, Identifiers, Constants, qualifier – const, volatile; Data types – string, pointer, reference, array,	,,		
11	**5/6**	28/02/2017	Bool , enumeration, complex number; typedef names, type compatibility, type conversion, Operators in C++,	,,		
12	**6/6**	6/02/2017	Operator Precedence and Operator Overloading; C++ expressions – New and Delete	,,	Assign ment -II	
13	**1/8**	6/03/2017	UNIT – 3: Introduction, The main() function, Function	,,		

			prototype,			
14	**2/8**	7/03/2017	Call by reference, Return by reference,	,,		
15	**3/8**	8/03/2017	Programs on Call by reference, Return by reference,	,,		
16	**4/8**	9/03/2017	Inline functions, Default arguments, const Arguments,	,,		
17	**5/8**	13/03/2017	Function Overloading,	,,		
18	**6/8**	13/03/2017	Friend and Virtual functions,	,,		
19	**7/8**	14/03/2017	pointer to functions.	,,		
20	**8/8**	15/03/2017	Revision on Unit 3	,,	Assignment – III	
21	**1/8**	16/03/2017	UNIT – 4: Introduction – declaration and definition of a Class, defining member functions,	,,		
22	**2/8**	20/03/2017	C++ program with a Class,	,,		
23	**3/8**	20/03/2017	Making an outside function Inline, Nesting of member functions,	,,		
24	**4/8**	21/03/2017	Arrays within a class, Static data members, static member functions,	,,		
25	**5/8**	22/03/2017	Objects – global & local objects, scope & lifetime, memory allocation for objects, dynamically allocated objects,	,,		
26	**6/8**	23/03/2017	pointers to objects, arrays of objects,	,,		
27	**7/8**	1/04/2017	function arguments with objects, returning objects; const member functions	,,		
28	**8/8**	1/04/2017	Revision on Unit 4		Assignment – IV	

29	**1/4**	3/04/2017	UNIT – 5 : Introduction, Constructors, Parameterized Constructors,	,,		
30	**2/4**	4/04/2017	Multiple constructors in a class, Constructors with default arguments,	,,		
31	**3/4**	5/04/2017	Dynamic initialization of objects, Copy constructor,	,,		
32	**4/4**	8/04/2017	Constructing two-dimensional arrays, const Objects, Destructors	,,	Assign ment -V	
33	**1/7**	8/04/2017	UNIT - 6: Introduction, Defining operator overloading,	,,		
34	**2/7**	10/04/2017	Overloading unary operators, Overloading binary operators,			
35	**3/7**	11/04/2017	Overloading unary operators, Overloading binary operators cont..			
36	**4/7**	12/04/2017	Overloading binary operators using Friends,	,,		
37	**5/7**	18/04/2017	Overloading binary operators using Friends cont…	,,		
38	**6/7**	18/04/2017	Rules for overloading operators, overloading a comma operator,	,,		
39	**7/7**	19/04/2017	Some more examples	,,		
40	**8/7**	20/04/2017	overloading the output Operator, Type conversion.	,,		
41	**9/7**	21/04/2017	Revision on Unit 6	,,	Assign ment -VI	
42	**1/6**	25/04/2017	UNIT – 7: Introduction, Defining derived classes, Single inheritance,	,,		

43	**2/6**	25/04/2017	Making a private member Inheritable, Multilevel inheritance,	,,		
44	**3/6**	26/04/2017	Multiple inheritance, Hierarchical inheritance, Hybrid inheritance,	,,		
45	**4/6**	27/3/2017	Virtual base classes, Abstract classes,	,,		
46	**5/6**	28/4/2017	Constructors & Destructors in base & derived classes	,,		
47	**6/6**	4/5/2017	Revision on Unit 7	,,		
48	**1/9**	4/5/2017	UNIT - 8: Introduction, Pointers, Pointers to Objects, this pointer,	,,		
49	**2/9**	5/5/2017	Pointers to derived classes, type-checking pointers, pointers to members,	,,		
50	**3/9**	11/5/2017	Virtual functions, Pure virtual functions.	,,		
51	**4/9**	12/5/2017	MANAGING CONSOLE I/O AND FILE I/O: C++ streams, C++ stream classes,	,,		
52	**5/9**	16/5/2017	examples of formatted and unformatted I/O operations, Classes for file stream operations,	,,	Assignment -VII	
53	**6/9**	16/5/2017	Methods of Opening and Closing a File,	,,		
54	**7/9**	17/5/2017	Examples of Opening file using constructor open(), file modes	,,		
55	**8/9**	18/5/2017	simple programming exercises.	,,		
56	**9/9**	23/5/2017	Revision on Unit 8	,,		
57		24/5/2017	Q & A session	,,		

Syllabus for Internal Assessment Tests (IAT)*

IAT #	Syllabus

IAT-1	Class # 01 – 21
IAT-2	Class # 22– 46
IAT-3	Class # 47 – 62

*** : See calendar of events for the schedules of IATs.**

Literature:

Book Type	Code	Author & Title	Publication information	
			Edition Publisher	ISBN #
Text Book	TB1	Object Oriented Programming with C++- Balagurusamy, E	TMH,4th edition, 2008.	0070669074, 9780070669079.
Text Book	TB2	C++, The Complete Reference -Herbert Schildt.	TMH, 4th edition	0072226803 9780072226805
Text Book	TB3	Object Oriented Programming with C++, Farrell,Cengage Learning,	First Edition,2008.	1423902572 9781423902577
References	RB1	The C++ programming language, Bjarne Stroustrup.	Pearson Education, 3rd edition,2006.	978-0201889543 10: 0201327554
References	RB2	Objected oriented programming with C++, bhave	Pearson Education, First Edition,2006.	0070593620, 9780070593626

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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	: 2-2-2017
SUBJECT	: Computer Aided Electrical Drawing (CAED)	DATE OF CLOSING	: 2-6-2017
SUBJECT CODE	: 10EE65	CLASS STRENGTH	: 60(A)
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**	13/2/17	Developed winding diagrams of D.C. machines – Simplex, single and double layer, Lap windings, integral slot., progressive		ASSIGNMENT – 1 (PRE-REQUISITIES)	
2	**2/1a**	13/2/17	Developed winding diagrams of D.C. machines – Simplex, single and double layer, Lap windings, integral slot., retrogressive			
3	**3/1a**	16/2/17	Developed winding diagrams of D.C. machines –Duplex, single and double layer, Lap windings, integral slot., progressive			
4	**4/1a**	16/2/17	Developed winding diagrams of D.C. machines –Duplex, single and double layer, Lap windings, integral slot., retrogressive		ASSIGNMENT – 2	
5	**5/1a**	23/2/17	Developed winding diagrams of D.C. machines – Simplex, single and double layer, Lap windings, fractional slot., retrogressive			

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

			windings			
20	**4/1b**	22/3/17	Fractional slot double layer Lap windings		ASSIGNMENT -4	
21	**5/1b**	3/4/17	Integral slot double layer Wave windings			
22	**6/1b**	3/4/17	Fractional slot double layer Wave windings			
23	**7/1b**	4/4/17	Fractional slot double layer Wave windings			
24	**8/1b**	4/4/17	Single layer windings – Un-bifurcated 2 tier windings,			
25	**9/1b**	10/4/17	Single layer windings – Un-bifurcated 3 tier windings,			
26	**10/1b**	10/4/17	Single layer windings –bifurcated 2 tier windings,			
27	**11/1b**	11/4/17	Single layer windings –bifurcated 3 tier windings,			
28	**12/1b**	11/4/17	Single layer windings- mush windings			
29	**1/3a**	19/4/17	Transformers - sectional views of single phase core type Transformers			
30	**2 /3a**	19/4/17	Transformers - sectional views of single and core type Transformers		ASSIGNMENT – 5	
31	**3/3a**	20/4/17	Transformers - sectional views of single phase shell type Transformers			
32	**4/3a**	20/4/17	Transformers - sectional views of single phase shell type Transformers			
33	**5/3a**	26/4/17	Transformers - sectional views of single phase core type Transformers with winding details			
34	**6/3a**	26/4/17	Transformers - sectional views of single phase shell type Transformers with winding details			
35	**7/3a**	27/4/17	Transformers - sectional views of three phase core type Transformers			

			with winding details			
36	**8/3a**	27/4/17	Transformers - sectional views of three phase core type Transformers			
37	**9/3a**	5/5/17	Transformers - sectional views of three phase shell type Transformers			
38	**1/3b**	5/5/17	Introduction to dc machine sectional views of each parts			
39	**2/3b**	11/5/17	D.C. machine - sectional views of yoke, field system (problems)		ASSIGNMENT - 6	
40	**3/3b**	11/5/17	D.C. machine - sectional views of yoke, field system, (problems)			
41	**4/3b**	17/5/17	D.C. machine - sectional views, armature Separately			
42	**5/3b**	17/5/17	D.C. machine - sectional views commutator dealt Separately			
43	**6/3b**	18/5/17	sectional views of Complete dc – machine with all parts			
44	**1/3c**	18/5/17	Alternator – sectional views of stator separately			
45	**2/3c**	23/5/17	Alternator – sectional views of stator dealt separately			
46	**3/3c**	23/5/17	Alternator – sectional views of rotor dealt separately		ASSIGNMENT – 7	
47	**4/3c**	24/5/17	Alternator – sectional views of rotor dealt separately			
48	**5/3c**	24/5/17	sectional views of Complete alternator with all the parts			

DSP

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CMR INSTITUTE OF TECHNOLOGY

Session wise – Course Plan

Department of Telecommunication

SEMESTER :VI
BRANCH :EEE
SUBJECT :Digital Signal Processing
SUBJECT CODE :10EE64
NO OF HRS/WK :6

NAME OF THE FACULTY :Mrs. Alka Raj
DATE OF COMMENCEMENT :13.02.2017
DATE OF CLOSING :24.05.2017
CLASS STRENGTH :
TOTAL HRS :73

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	1/0	13/02	Review of Signals and Systems.	Board,	A1	
2	2/0	14/02	Review of Signals and Systems, Peri-	„		
3	3/0	15/02	Properties of systems.	„		
4	4/0	17/02	Convolution.	„		
5	5/0	18/02	Problems on convolution.	„		
6	6/0	18/02	Complex exponential as Eigen Func-	„		
7	7/0	20/02	Introduction to Fourier Representa-	„		
8	8/0	21/02	Fourier Transform.	„		
9	9/0	22/02	DTFS.	„		
10	10/0	27/02	DTFT.	„		
11	1/1 and 2	28/02	Frequency domain sampling,	„	A2	
12	2/1 and 2	28/02	Parseval's theorem and Problems on	„		
13	3/1 and 2	01/03	DFT as linear transformation, some	„		

14	4/1 and 2	02/03	Properties of DFT.	„		
15	5/1 and 2	06/03	Problems on DFT.	„		
16	6/1 and 2	08/03	Circular Symmetries of a sequence,	„		
17	7/1 and 2	09/03	Circular Convolution, problem solv- ing methods- Use of tabular	„	A3	
18	8/1 and 2	09/03	Circular Convolution, problem solv- ing methods- Stock hams's	„		
19	9/1 and 2	10/03	Additional properties of DFT and	„		

Ses- sion No	Chapter no (No of hrs planed for the chapter)	DATE	Topics planned for the session	Teaching Aids	As- sign- ments/ Tests planne d for the chap-	Top- ics cov- ered As per plan
20	10 /1 and 2	11/03	Additional properties of DFT and	Board, chalk,duster		
21	11/1 and 2	13/03	Generalized Parseval's theorem, lin- ear convolution using circular	„		
22	12 /1 and	15/03	Linear Convolution-Problems.	„		
23	13/1 and 2	16/03	Filtering of long data sequences, over-	„		
24	14/1 and 2	16/03	Overlap save method, problem.	„		
25	1/3 and 4	17/03	Introduction to FFT algorithms.	„	A4	
26	2/3and 4	18/03	Derivation of DIT FFT algorithm, Computational complexity of	„		
27	3/3 and 4	20/03	Radix 2 DIT FFT algorithm.	„		
28	4/3and 4	22/03	Problems on DIT FFT algorithm.	„		
29	5/3 and 4	23/03	Problems on DIT FFT algorithm.	„		
30	6/3and 4	23/03	Derivation of DIF FFT algorithm, Computational complexity of	„		
31	7/3 and 4	24/03	Radix 2 DIF FFT algorithm.	„		
32	8/3and 4	31/03	Problems on DIF FFT algorithm.	„		
33	9/3 and 4	01/04	Derivation of inverse DIT FFT algo-	„	A5	
34	10/3and 4	04/04	Radix 2 inverse DIT FFT	„		
35	11/3 and 4	05/04	Derivation of inverse DIF FFT algo-	„		
36	12/3and 4	05/04	Radix 2 inverse DIF FFT	„		
37	13/3 and 4	06/04	Problems on Circular and linear con-	„		
38	14/3and 4	07/04	DIT FFT algorithm for composite	„		
39	15/3 and 4	08/04	Computing DFT for $N = 9$ and $N =$	„		

40	16/3and 4	11/04	Radix 3 DIF FFT algorithm.	„		
41	1/8	12/04	Realization of Digital system - Block diagram and Signal flow	„	A6	
42	2/8	12/04	Direct form II and Cascade Form re-	„		
43	3/8	13/04	Parallel Form realization of IIR sys-	„		
44	4/8	17/04	Direct form, Cascade Form and Lin-	„		
45	5/8	18/04	Lattice structure realization of FIR fil-	„		
Ses-sion No	Chapter no (No of hrs planed for the chapter)	DATE	Topics planned for the session	Teaching Aids	As-sign-ments/ Tests planned for the chap-	Top-ics cov-ered As per plan
46	6/8	20/04	Lattice ladder structure realization of	Board, chalk,duster		
47	1/7	21/04	Impulse response of ideal	„	A7	
48	2/7	21/04	Basics of filter design, impulse re-	„		
49	3/7	22/04	Relationship between real and imag- inary parts of frequency	„		
50	4/7	24/04	FIR filters, linear phase, different	„		
51	5/7	25/04	Different types of FIR filters, z trans-	„		
52	6/7	27/04	FIR filter design using windows.	„		
53	7/7	28/04	Problems on Low Pass FIR filter de-	„		
54	8/7	28/04	Problems on High Pass FIR filter de-	„		
55	9/7	02/05	Problems on Band Pass FIR filter de-	„		
56	10/7	03/05	FIR filter design using frequency sam-	„		
57	1/5 and 6	04/05	IIR filter design, laplace transform, z	„	A8	
58	2/5 and 6	11/05	Introduction to IIR filter design from	„		
59	3/5 and 6	12/05	Properties of mapping functions. In- troduction to IIR filter design	„		
60	4/5 and 6	12/05	Problems on impulse invariance	„		
61	5/5 and 6	13/05	Bilinear Transformation.	„		
62	6/5 and 6	15/05	Problems on Bilinear	„		
63	7/5 and 6	16/05	Butterworth filter design-	„	A9	

64	8/5 and 6	16/05	Butterworth filter design-	„		
65	9/5 and 6	18/05	Problems on analog butterworth filter	„		
66	10/5 and 6	19/05	Problems on digital butterworth filter	„		
67	11/5 and 6	19/05	Problems on butterworth filter	„		
68	12/5 and 6	20/05	Frequency transformations.	„		
69	13/5 and 6	20/05	Chebyshev Filter Design-	„		
70	14/5 and 6	22/05	Chebyshev Filter Design-	„		
71	15/5 and 6	23/05	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 chapter	Topics covered As per plan
72	16/5 and 6	23/05	Problems on digital Chebyshev Filter	Board, chalk,duster		
73		24/05	Revision	„		

PSA

CMR Institute of Technology, Bangalore

Department(s): Electrical and Electronics Engineering

Semester: 06 Section(s): A &B

Subject: Power System Analysis 10EE61 Lectures/week: 05

Course Instructor(s): Prof. Sanitha Michail

Course duration: 13 Feb 2017 –3 June 2017

Lesson Plan

Lecture #	Books & Section	Topics	Portions coverage %	
			Individual	Cumulative
1-8	TB1 : 1.1 – 1.8	**U1) REPRESENTATION OF POWER SYSTEM COMPONENTS:** Introduction to PSA/prerequisites. Circuit models of transmission line, synchronous machines, transformers and load. Single line diagrams. Impedence and reactance diagrams. Per unit system, per unit impedence diagrams. Numericals.	12.9	12.9
9-17	TB1 : 2.1 – 2.5	**U2)SYMMETRICAL 3-PHASE FAULTS:** Introduction. Analysis of synchronous machines and power system. Transients on a transmission line. Short circuit currents and reactance of synchronous machines with and without load. Numericals.	14.5	27.5
18-28	TB1 : 3.1 – 3.10	**U3)SYMMETRICAL COMPONENTS:** Introduction. Analysis of unbalanced load against balanced 3-phase supply. Neutral shift. Resolution of unbalanced phasors into their symmetrical components. Phase shift of symmetrical components in star-delta transformer bank. Power in terms of symmetrical components. Analysis of balanced and unbalanced loads against unbalanced 3-	17.75	45

		phase supply. Numericals.		
29-34	TB1 : 4.1 – 4.7	**U4) SYMMETRICAL COMPONENTS:** Sequence impedences and networks of power system elements. Sequence networks of power systems. Measurement of sequence impedence of synchronous generator. Numericals.	9.5	55
35-44	TB1 : 5.1 – 5.3	**U5)UNSYMMETRICAL FAULTS:** LG,LL,LLG faults on an unbalanced alternator with and without fault impedance. Numericals.	9.5	64.5
45-48	TB1 : 5.4 – 5.5	**U6)UNSYMMETRICAL FAULTS:** Unsymmetrical faults on a power system with and without fault impedance. Open conductor faults in power system. Numericals.	12.9	75.8
47-56	TB1 : 6.1 – 6.4	**U7)STABILITY STUDIES:** Introduction. Steady state and transient stability. Rotor dynamics and the swing equation. Equal area criterion for transient stability evaluation and its applications. Numericals.	12.9	90.3
57-62	TB1 : 7.1 – 7.3	**U8)UNBALANCED OPERATION OF THREE PHASE INDUCTION MOTORS:** Analysis of three phase induction motor with unbalanced voltage. Analysis of three phase IM with one line open. Numericals.	9.5	100

Syllabus for Internal Assessment Tests (IAT)*:

IAT #	Syllabus
IAT-1	Class# 01-28
IAT-2	Class# 28-48
IAT-3	Class# 47-62

Literature:

Book Type	Code	Author & Title	Publication information	
			Edition // Publisher	ISBN
Text Book	TB1	V.Neelkantan Power System Analysis and Stability	2009 Shiva Book Centre	
Reference	RB1	William.D.Stevenson Elements of Power System Analysis	4th Edition Tata Mc-Graw Hill	0070665842
Reference	RB2	Haadi Saadat Power System Analysis	2002 Tata Mc-Graw Hill	0070487391