



P.B.SIDDHARTHA COLLEGE OF ARTS & SCIENCE: VIJAYAWADA – 520010

Teaching Plan 2010 – 11 Monsoon Semester

DEPARTMENT OF ELECTRONICS

TITLE: CIRCUIT THEORY

Class Work Commences: 21/06/2010

Last Instructional Day: / /2010

Class: I B.Sc (MECs)

Course Code: ELE 031

Lecturer: D.SRINIVASA REDDY

S.NO	SUB TOPICS	PROPOSED DATE	COMPLITED DATE	REMARKS
1	Current, Voltage & Resistance			
2	Ohm's Law, power & Energy			
3	Series Networks			
4	Parallel Networks			
5	Problems			
6	Problems			
7	Problems			
8	KCL & KVL			
9	Brach Current Method			
10	Mesh Analysis			
11	Nodal Analysis			
12	Star/Delta Transformations			
13	Problems			
14	Problems			
15	Problems			
16	Problems			
17	Introduction, The Electric field			
18	Capacitance, Dielectric Strength & Leakage Current			
19	Types of Capacitors, Capacitors in Series & Parallel			
20	Energy stored by Capacitor, Stray Capacitances			
21	Problems			
22	Problems			
23	Introduction, Faraday's Law of Electromagnetic Induction, Lenz's Law			
24	Self Inductance, Mutual Inductance			
25	Types of Inductors, Induced Voltages Inductors in Series & Parallel			

26	Energy stored in an Inductor, Problems			
27	Problems			
28	Problems			
1st Internal				
29	Introduction, Transformers			
30	Transformers			
31	Superposition Theorem			
32	Reciprocity Theorem			
33	Thevenin's Theorem			
34	Norton's Theorem			
35	Maximum Power Transform Theorem			
36	Milliman's Theorem			
37	Substitution Theorem Tellegen's Theorem			
38	Problems			
39	Problems			
40	Problems			
41	Problems			
42	Transients in Capacitive networks, Charging Phase			
43	Discharging Phase, Instantaneous Values, RC - Time Constant			
44	RL -Transients, Storage Cycle			
45	Decay Phase, Instantaneous Values, R/L Time Constant			
46	RL & RLC Circuits/ Problems			
47	Problems			
48	Problems			
49	Sinusoidal Alternating Waveforms, Peak Value			
50	Average, rms Values			
51	Basic Elements			
52	Phasors			
53	Problems			
54	Problems			
55	Problems			
56	Series Resonance – Resonant Frequency, Current & Voltage Relations			
57	Series Resonance – Q-factor, Selectivity, Bandwidth			

58	Parallel Resonance – Resonant Frequency, Current & Voltage Relations			
59	Parallel Resonance – Q-factor, Selectivity, Bandwidth			
60	Filters			
61	Filers			
62	Problems			
63	Problems			
64	Problems			
2nd Internal				



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Teaching Plan 2010 – 11 Monsoon Semester

DEPARTMENT OF ELECTRONICS

TITLE: ANALOG & DIGITAL COMMUNICATION SYSTEMS

Class Work Commences: 14/06/2010

Last Instructional Day: / /2010

Class: III B.Sc (MECs)

Course Code: ELE 055

Lecturer: D.SRINIVASA REDDY

S.NO	SUBTOPICS	DATE PROPOSED	COMPLETED DATE	ASSIGNMENT	SEMINAR
1	INTRODUCTION TO MODULATION				
2	NEED FOR MODULATION				
3	AMPLITUDE MODULATION				
4	FREQUENCY SPECTRUM OF AM-WAVE				
5	REPRESENTATION OF AM				
6	POWER RELATIONS IN THE AM-WAVE				
7	GENERATION OF AM				
8	T – M SUPPRESSION OF CARRIER WAVE				
9	BALANCED MODULATOR				
10	SUPPRESSION OF SSB USING FILTER SYSTEM METHOD				
11	PHASE SHIFT METHOD				
12	INTRODUCTION TO FREQUENCY MODULATION				
13	THEORY OF FM				
14	MATHEMATICAL REPRESENTATION OF FM				
15	FREQUENCY SPECTRUM OF FM WAVE				
16	NARROW BAND FM & WIDE BAND FM				
17	POWER CONTENTS OF THE CARRIER AND SIDE BANDS				
18	GENERATION OF FM-SIGNALS-REACTANCE MODULATORS				

19	INTRODUCTION TO RECEIVER CIRCUITS				
20	NOISE-THERMAL,SHOT, NOISE FIGURE				
21	SUPER-HETERO-DYNE RECEIVER BLOCK DIAGRAM				
22	FM-RECEIVER				
23	DISCRIMINATORS-SLOPE,BALANCED SLOPE				
24	PHASE DISCRIMINATOR & RATIO DETECTOR				
25	INTRODUCTION TO ANTENNAS				
26	ANTENNA PARAMETERS GAIN, BAND WIDTH				
27	RADIATION PATTERNS DIRECTIVITY				
28	EFFECTIVE APERTURE EFFICIENCY				
29	YAGI-UDA ANTENNA				
30	HELICAL ANTENNA				
31	PARBOLIC ANTENNA				
		I-internal			
32	INTRODUCTION TO RADIO WAVE PROPOGATION				
33	COMMUNICATION BANDS				
34	ELECTRO MAGNETIC WAVES				
35	PROPOGATION OF WAVES – GROUND WAVES				
36	IONO-SPHERE & SPACE WAVES				
37	INTRODUCTION TO PULSE MODULATION				
38	SAMPLING THEOREM, TDM,FDM				
39	PAM GENERATION & DETECTION				
40	PWM GENERATION & DETECTION				
41	PPM GENERATION & DETECTION				
42	INTRODUCTION TO DIGITAL COMMUNICATIONS				

43	PCM-PCM ENCODERS				
44	QUANTIZATION NOISE				
45	S/N RATIO OF PCM SYS				
46	RELATION BTW S/N RATIO & BW				
47	BAND WIDTH				
48	ADVANTAGES OF DIGITAL OVER ANALOG MODULATIONS				
49	ADVANTAGES OF SHIFT KEYING OVER DIGITAL COMMUNICATION				
50	TYPES OF SHIFT KEYING ASK- GENERATION,DETECTION				
51	FSK- GENERATION,DETECTION				
52	PSK- GENERATION,DETECTION				
53	INTRODUCTION TO SPREAD SPECTRUM DSSS				
54	PN-SEQUENCE PROPERTIES				
		II-INTERNAL			