

**CMR INSTITUTE
OF TECHNOLOGY**

Session wise – Lesson Plan

Department of Telecommunication

SEMESTER:VII
BRANCH: ECE (A and B)
SUBJECT: Wireless Communication

NAME OF THE FACULTY: Mr. Sumit Maheshwari
DATE OF COMMENCEMENT: 21st Jan 2016
SUBJECT CODE: 10EC81

S No.	Chapter Number (No. of Hrs Planned for the chapter)	Topics Planned for Session	Teaching Aids Used	Assignment / Tests Planned for the chapter	% of Syllabus Covered
1.	1/10	UNIT - 1 Introduction to wireless telecommunication systems & Networks	Black Board & Chalk and LCD		
2.	2/10	History and Evolution of wireless cellular networks 1g	”		
3.	3/10	Evolution of wireless cellular networks 1g	”		
4.	4/10	AMPS (detail)	LCD		
5.	5/10	Overview of 2Gsystem	”	I	
6.	6/10	Overview of 3Gsystem	”		
7.	7/10	Overview of 4G system	”		
8.	8/10	Design Considerations	”		
9.	9/10	Discussion on Wireless Network Planning in Industry	”		
10.	10/10	Conclusion and class test: Unit 1	”		15%
11.	1/8	UNIT - 2 Common Cellular System components	Black board & Chalk and LCD		

12.	2/8	Block diagram of SD & subsystem	LCD		
13.	3/8	Base switching center and working of RBS	”		
14.	4/8	Mobile switching Center, subsystem and working,	”		
15.	5/8	Databases of cellular system, HLR,VLR,EIR,ILR,AUC	”	II	
16.	6/8	Hardware and software, views of cellular networks.	”		
17.	7/8	Cellular component identification.	”		
18.	8/8	Call Establishment	”		28%
19.	1/9	UNIT - 3 Wireless network architecture and operation, Cellular concept	Black board & Chalk		
20.	2/9	Cell fundamentals & Examples	”		
21.	3/9	Capacity expansion techniques	”		
22.	4/9	Cellular backbone networks	Black board & Chalk	III	
23.	5/9	Mobility management	”		
24.	6/9	Radio resources & Power management	”		
25.	7/9	Wireless network security	”		
26.	8/9	Details of Cellular concepts	”		
27.	9/9	Class test and Discussion	”		35%
28.	1/11	UNIT - 4 GSM and TDMA techniques	”		
29.	2/11	GSM system overview	Chalk and Talk		
30.	3/11	GSM Network and system Architectures	”		
31.	4/11	GSM Network and system Architecture	”		
32.	5/11	GSM signaling Model	”		

33.	6/11	GSM channel concepts	”		
34.	7/11	Mapping of logical channels	”	IV	
35.	8/11	GSM identifiers	”		
36.	9/11	GSM identifiers	”		
37.	10/11	GSM identifiers	”		
38.	11/11	GSM identifiers	”		50%
39.	1/10	UNIT - 5 GSM system operation.	”		
40.	2/10	Initialization Operations	”		
41.	3/10	Traffic cases	”		
42.	4/10	Roaming,	”		
43.	5/10	Handover	”		
44.	6/10	GSM protocol architecture	”		
45.	7/10	TDMA systems	”		
46.	8/10	Traffic Types and Measurement Overview	”		
47.	9/10	More about protocols	”		
48.	10/10	Discussion and Class test	”		60%
49.	1/8	UNIT - 7 Wireless Modulation techniques and Hardware	”	VII	
50.	2/8	Characteristics of air Interface & Path loss models	Black Board & chalk		
51.	3/8	Wireless coding techniques	”		
52.	4/8	Digital modulation techniques - OFDM	”		
53.	5/8	UWB radio techniques	”		
54.	6/8	Diversity techniques	”		
55.	7/8	Typical GSM Hardware	”		

56.	8/8	Discussion and class test	”		84%
57.	1/9	UNIT - 8 Introduction to wireless LAN 802.11X technologies	”	VIII	
58.	2/9	Evolution of wireless LAN technology	LCD		
59.	3/9	Introduction to 802.15X technologies in PAN - Application and architecture Bluetooth	”		
60.	4/9	Introduction to Broadband wireless MAN, 802.16X technologies	”		
61.	5/9	Wireless MAN	”		
62.	6/9	Applications & Revision	”		100%
63.	7/9	Revision	Oral Quiz		
64.	8/9	Revision	Written Quiz		
65.	9/9	Revision	Written Quiz		

NO. OF HOURS/WEEK: 6 TOTAL HOURS: 78 CLASS STRENGTH: 125

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Department of Telecommunication

SEMESTER : VIII
SECTIONS : A,B
SUBJECT : DIGITAL SWITCHING SYSTEMS
SUBJECT CODE : 10EC82
NO OF HRS/WK : 6

NAME OF THE FACULTY : SRIDEVI S
DATE OF COMMENCEMENT : 21.01.2016
DATE OF CLOSING : 21.05.2016
CLASS STRENGTH : 62,63
TOTAL HRS : 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	21/1	Developments of telecommunications	Board, chalk, duster		
2	2/1	21/1	Network structure	„		
3	3/1	22/1	Network services	„		
4	4/1	22/1	terminology	„		
5	5/1	23/1	Regulation,	„		
6	6/1	23/1	Standards	„		
7	7/1	28/1	Introduction to telecommunications transmission	„		
8	8/1	28/1	Power levels	Board, chalk, duster		
9	9/1	29/1	Four wire circuits	„		

10	10/1	29/1	Digital transmission, FDM,	„		
11	11/1	30/1	TDM,.	„		
12	12/1	30/1	PDH and SDH, Transmission performance			
13	1/2	4/2	EVOLUTION OF SWITCHING SYSTEMS: Introduction, Message switching, Circuit switching, Manual Systems	„		
14	2/2	4/2	Functions of switching systems,	„		
15	3/2	5/2	Distribution systems,	„		
16	4/2	5/2	Basics of crossbar systems,			
17	5/2	11/2	Electronic switching, Digital switching systems.		Assignment 1	
18	6/2	11/2	DIGITAL SWITCHING SYSTEMS: Fundamentals : Purpose of analysis, Basic central office linkages,			
19	7/2	12/2	Outside plant versus inside plant, Switching system hierarchy,	„		
20	8/2	12/2	Evolution of digital switching systems, Stored program control switching systems,	„		
21	9/2	13/2	Digital switching system fundamentals,	„		
22	10/2	13/2	Building blocks of a digital switching system, Basic call processing	„	Assignment 2	
23	1/3	18/2	TELECOMMUNICATIONS TRAFFIC: Introduction, Unit of traffic,	„		
24	2/3	18/2	Congestion,			
25	3/3	25/2	Traffic measurement,			
26	4/3	25/2	Mathematical model,.	Board, chalk, duster		
27	5/3	3/3	lost call systems,	„		

28	6/3	3/3	Queuing systems	„		
29	1/4	4/3	SWITCHING SYSTEMS: Introduction, Single stage networks,.	„	Assignment 3	
30	2/4	4/3	Gradings,	„		
31	3/4	5/3	Link Systems, GOS of Linked systems	„		
	1/5	5/3	TIME DIVISION SWITCHING: Introduction,	„		
33	2/5	10/3	space and time switching,	„		
34	3/5	10/3	Time switching networks,	„	Assignment 4	
35	4/5	11/3	Synchronisation	Board, chalk, duster		
36	5/5	11/3	Revision	„		
37	1/6	17/3	SWITCHING SYSTEM SOFTWARE: Introduction, Scope, Basic software architecture,	„		
38	2/6	17/3	Operating systems, Database Management,	„		
39	3/6	18/3	Concept of generic program,	„		
40	4/6	18/3	Software architecture for level 1 control, Software architecture for level 2 control, Software architecture for level 3 control, ,	„		
41	5/6	18/3	Digital switching system software classification	„		
42	6/6	19/3	Call models, Connect sequence,	„	Assignment 5	
43	7/6	19/3	Software linkages during call,			
44	8/6	24/2	Call features, Feature flow diagram,	„		

			Feature interaction			
45	1/7	24/2	MAINTENANCE OF DIGITAL SWITCHING SYSTEM: Introduction, Scope, Software maintenance, Interface of a typical digital switching system central office,	„		
46	2/7	31/3	System outage and its impact on digital switching system reliability,	„	Assignment 6	
47	3/7	31/3	Impact of software patches on digital switching system maintainability, ..	„		
48	4/7	1/4	Embedded patcher concept,	„		
49	5/7	1/4	Growth of digital switching system central office,	„		
50	6/7	2/4	Generic program upgrade, A methodology for proper maintenance of digital switching system,	„		
51	7/7	2/4	Effect of firmware deployment on digital switching system,	„	Assignment 7	
52	8/7	7/4	Firmware-software coupling, Switching system maintainability metrics,			
53	9/7	7/4	Upgrade process success rate,	Board, chalk, duster		
54	10/7	15/4	Number of patches applied per year,	„		
55	11/7	15/4	Diagnostic resolution rate,	„		
56	12/7	16/4	Reported critical and major faults corrected,	„		
57	13/7	16/4	A strategy improving software quality,	„	Assignment 8	
58	14/7	21/4	Program for software process improvement,	„		
59	15/7	21/4	Software processes improvement,	„		
60	16/7	22/4	Software processes	„		
61	17/7	22/4	Metrics, Defect analysis,	„		
62	1/8	23/4	A GENERIC DIGITAL SWITCHING SYSTEM	„	Assignment 9	

			MODEL: Introduction, Scope, Hardware architecture,			
63	2/8	23/4	Software architecture,			
64	3/8	28/4	Recovery strategy,	„		
65	4/8	28/4	Simple call through a digital system,	„		
66	5/8	29/4	Common characteristics of digital switching systems			
67	6/8	29/4	Analysis report.			
68	7/8	30/4	Reliability analysis.			
69	8/8	30/4	Revision			
70	9/8	5/5	Revision			
71	10/8	6/5	Revision			
72	11/8	7/5	Revision			

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Department of Telecommunication

SEMESTER : VIII
BRANCH : TCE /ECE
SUBJECT : MMC
SUBJECT CODE: 10EC841
NO OF HRS/WK: 5

NAME OF THE FACULTY : Mrs.Pappa.M
DATE OF COMMENCEMENT : 21.01.2016
DATE OF CLOSING : 20.05.2016
CLASS STRENGTH : 86/70
TOTAL HRS : 75

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	21.01.16	Introduction, multimedia information representation, multimedia networks	Board, chalk		
2	2/1	21.01.16	Different types of multimedia networks	„		
3	3/1	22.01.16	Multimedia applications	„	Assignment- I	
4	4/1	22.01.16	Media types, Communication modes, Network types	„		
5	5/1	23.01.16	Multipoint conferencing, Network QoS	„		
6	6/1	23.01.16	Application QoS, Problems	„		
7	7/1	28.01.16	Test on Chapter-I			

8	1/2	28.01.16	Digitization Principles-Encoder Design, Decoder Design, Quantization	Board, chalk		
9	2/2	29.01.16	Text-Unformatted, Formatted, Hypertext	„		
10	3/2	29.01.16	Images-Graphics, Digitized Documents, Pictures	„	Assignment -II	
11	4/2	30.01.16	Digital Cameras and Scanners, Problems	„		
12	5/2	30.01.16	Audio-PCM Principles, problems	„		
13	6/2	04.02.16	Synthesized Audio	„		
14	7/2	04.02.16	Video-Broadcast Television, Digital video standards	„		
15	8/2	05.02.16	Test on Chapter-II			
16	1/3	05.02.16	Compression Principles and different methods of Compression	Board, chalk		
17	2/3	11.02.16	Text Compression-Static Huffman coding, Problems			
18	3/3	11.02.16	Dynamic Huffman coding, Problems	„		
19	4/3	12.02.16	Arithmetic coding, Problems	„	Assignment –III	
20	5/3	12.02.16	Lempel- ziv and Lempel-ziv-welsh coding	„		
21	6/3	13.02.16	Image Compression-GIF, TIFF	„		
22	7/3	13.02.16	Image Compression-Digitized Documents	„		
23	8/3	18.02.16	JPEG Compression			
24	9/3	18.02.16	Test on Chapter-III			
25	1/5	25.02.16	Introduction to LANs, Ethernet/IEEE 802.3	Board, chalk		
26	2/5	25.02.16	Token Ring-Control token, wiring configuration, Frame format	„		
27	3/5	26.02.16	Ring management, Priority operation	„		
28	4/5	26.02.16	Bridges-Transparent Bridges	„	Assignment –IV	

29	5/5	03.03.16	Bridges-Source Routing Bridges	„		
30	6/5	03.03.16	FDDI-Network, Frame transmission and reception	„		
31	7/5	04.03.16	Performance of FDDI and TTRT	„		
32	8/5	04.03.16	High speed LANs-Fast Ethernet	„		
33	9/5	05.03.16	High speed LANs-Switched fast Ethernet, Gigabit Ethernet	Board, chalk		
34	10/5	05.03.16	LAN Protocols	„		
35	11/5	10.03.16	Test on Chapter-V			
36	1/6	10.03.16	Internet Networking components and Protocols, IP Datagram	Board, chalk		
37	2/6	11.03.16	Fragmentation and Reassembly	„		
38	3/6	11.03.16	IP addresses, subnets	„		
39	4/6	17.03.16	ARP and RARP	„	Assignment –V	
40	5/6	17.03.16	IPV6-Datagram format, Address structure	„		
41	6/6	18.03.16	IPV6-Extension headers, Auto configuration	„		
42	7/6	18.03.16	IPV6/IPV4 Interoperability	„		
43	8/6	19.03.16	Test on Chapter-VI			
44	1/7	19.03.16	Broadband ATM Networks-Cell Format and Switching Principles	Board, chalk		
45	2/7	24.03.16	Switch Architectures	„		
46	3/7	24.03.16	Protocol Architecture	„	Assignment –VI	
47	4/7	31.03.16	ATM Adaptation Layer-AAL1,2	„		
48	5/7	31.03.16	ATM Adaptation Layer-AAL3/4,AAL5	„		
49	6/7	01.04.16	ATM Layer	„		
50	7/7	01.04.16	ATM LANs, Call Processing	„		

51	8/7	02.04.16	LAN Emulation, Classical IP over ATM	„		
52	9/7	02.04.16	Test on Chapter-VII			
53	1/8	07.04.16	TCP/IP Protocol Suite	Board, chalk		
54	2/8	07.04.16	TCP-User services, Protocol Operation	„		
55	3/8	15.04.16	TCP-Error control, Congestion control	Board, chalk	Assignment –VII	
56	4/8	15.04.16	Connection termination	„		
57	5/8	16.04.16	UDP-User Services, Protocol operation	„		
58	6/8	16.04.16	RTP	„		
59	7/8	21.04.16	RTCP	„		
60	8/8	21.04.16	Test on Chapter-VIII			
61	1/4	22.04.16	Audio Compression-DPCM, ADPCM	Board, chalk		
62	2/4	22.04.16	Audio Compression-LPC, Code Excited LPC			
63	3/4	23.04.16	Audio Compression-Perceptual Coding, MPEG Audio Coders, Dolby Audio coders			
64	4/4	23.04.16	Video Compression Principles		Assignment–VIII	
65	5/4	28.04.16	Video Compression-H.261, H.263			
66	6/4	28.04.16	Error resilience Techniques-H.263			
67	7/4	29.04.16	MPEG 1,2			
68	8/4	29.04.16	MPEG 4,Error resilient techniques			
69		30.04.16	Revision			
70		30.04.16	Revision			

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Session wise – Course Plan

Department of Electronics and Communication

SEMESTER :VIII
BRANCH : TCE
SUBJECT : Network Security
SUBJECT CODE :
NO OF HRS/WK : 6

NAME OF THE FACULTY : Miss.Nayan
DATE OF COMMENCEMENT : 28.01.2016
DATE OF CLOSING : 15.5.2016
CLASS STRENGTH :
TOTAL HRS : 65

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	28.01.16	Unit-1- Introduction	Board, chalk, duster		
2	2,1	29.01.16	OSI Security Architecture, OSI Attacks	„		
3	3/1	30.01.16	Security Services, Security Mechanisms , Model for network Security	„		
4	1/2	4.02.16	Unit – 2: Classical Encryption Techniques : Symmetric cipher model	„		
5	2/2	5.02.16	Cryptanalysis,Substitution techniques	„		

6	3/2	11.02.16	Hill cipher	„		
7	4,5/2	12.02.16	Block cipher principles ,Feistel cipher	„		
8	6,7/2	13.02.16	Data encryption standard, differential and linear cryptanalysis	Board, chalk, duster		
9	8,9/2	18.02.16	Block cipher design principles, and Modes of Operation	„		
10	10,11/2	25.02.16	Evaluation Criteria for Advanced Encryption Standard, The AES Cipher..	„		
11	12,13/2	26.02.16	The AES Cipher(contd)	„		
12	1,2/3	03.03.16	Unit –3 Principles of Public-Key Cryptasystems, The RSA algorithm,	„		
13	3,4/3	04.03.16	The RSA algorithm	„	Assignment -I	
14	5,6/3	05.03.16	Key Management, Diffie - Hellman Key Exchange,			
15	7,8/3	10.03.16	Elliptic Curve Arithmetic	„		
16	9,10/3	11.03.16	Authentication functions	“		
17	11,12/3	17.03.16	Hash function	“		
18	13,14/3	18.03.16	Birthday attack and security of hash functions	“		
19	1,2/4	19.03.16	UNIT - 4 Digital signatures,	“		
20	3,4/4	24.03.16	Authentication Protocols,	“		
21	5,6/4	17.03.16	Authentication Protocols,	“		
22	7,8/4	18.03.16	Digital Signature Standard	„		
23	1/5	19.03.16	UNIT - 5 Web Security Consideration,	„	Assignment –II	
24	2,3/5	24.03.16	Security socket layer (SSL)	“		
25	4,5/5	31.03.16	Security socket layer (SSL)	„		
26	6/5	01.04.16	Transport layer security, Secure Electronic	„		

			Transaction.			
27	1,2/6	07.04.16	UNIT - 6 Intruders, Intrusion Detection	„		
28	3,4/6	15.04.16	Password Management	“		
29	5,6/6	16.04.16	Password Management	“		
30	1,2/7	21.04.16	UNIT - 7 MALICIOUS SOFTWARE:introduction	“	Assignm nt –III	
31	3/7	22.04.16	Viruses and Related Threats,	Board, chalk, duster		
32	4,5/7	23.04.16	Viruses and Related Threats, Virus Countermeasures	„		
33	1,2/8	28.04.16	UNIT - 8 Firewalls Design Principles,	“		
34	3,4/8	29.04.16	Firewall configurations	„		
35	5,6/8	30.04.16	Trusted Systems.	„		

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