

Bhoj Reddy Engineering College for Women: Hyderabad

Department of Electronics and Communication Engineering

Lesson plan of faculty member for the academic year 2016–17

Class: II B Tech

Branch-Section: IT-A

Semester: II

Subject: Data Communications

Lectures per week: 4+3 (Tutorial)

Lecture Number	Topics to be covered	Date (s)
UNIT – I: Introduction to Data Communication		
1	Tutorial (G1,G2,G3)	10 Dec 2016
2	Introduction to Data communication systems, History of Data Communications, Data communications Network architecture, protocols and standards	10 Dec 2016
3	Standard Organizations for Data Communications, Layered Network Architecture	14 Dec 2016
4	Tutorial (G2,G1,G3)	14 Dec 2016
5	Open Systems Interconnection	15 Dec 2016
6	Data Communications Circuits, Serial and Parallel Data Transmissions, Data Communications Circuit Arrangements Data Communications Networks : Introduction	17 Dec 2016
7	Tutorial (G1,G2,G3)	17 Dec 2016
8	Data Communications Networks : Network Components, Functions and Features; Network Models	19 Dec 2016
9	Data Communications Networks: Network Topologies, Network Classifications	21 Dec 2016
10	Tutorial (G3, G1, G2)	21 Dec 2016
11	Alternate Protocol Suites, Introduction to Analog and Digital, Signal Analysis	22 Dec 2016
12	Electrical Noise and Signal – to- Noise Ratio	24 Dec 2016
13	Analog Modulation Systems	28 Dec 2016
14	Tutorial (G3,G1,G2)	28 Dec 2016
15	Information Capacity, Bits, Bit Rate, Baud, and M-ary Encoding	29 Dec 2016
16	Tutorial (G1,G2,G3)	31 Dec 2016
17	Digital Modulation	31 Dec 2016
UNIT-II: Multiplexers		
18	Multiplexers, Advantages of Multiplexers, Frequency Division Multiplexing	2 Jan 2017
19	Time Division Multiplexing, Statistical time-Division Multiplexing ,	4 Jan 2017
20	Tutorial (G3,G1,G2)	4 Jan 2017
21	Concentrators, Switching Techniques	5 Jan 2017
22	Tutorial (G1,G2,G3)	7 Jan 2017
23	Introduction, Communication Channel – Channel Bandwidths, Channel Services, Channel Standard Interfaces	7 Jan 2017
24	Open Wireless, Twisted pair wires/Cables	9 Jan 2017
25	Coaxial Cables	11 Jan 2017
26	Optical fiber Communications advantages and disadvantages of optical fiber communications	12 Jan 2017
27	Wireless Communication- Satellite and Cellular Radio Communications	16 Jan 2017
28	Typical Broadband LANs.	18 Jan 2017
29	Tutorial (G3,G1,G2)	18 Jan 2017
30		19 Jan 2017
UNIT-III: Telephone Instruments and Signals		
31	Telephone Instruments and Signals Introduction, The Subscriber Loop, Standard Telephone Set	20 Feb 2017

32	Tutorial (G2,G1,G3)	20 Feb 2017
33	Basic Telephone Call Procedures, Call Progress Tones and Signals	22 Feb 2017
34	Tutorial (G3,G1,G2)	22 Feb 2017
35	Call Progress Tones and Signals	23 Feb 2017
36	Tutorial (G1,G2,G3)	25 Feb 2017
37	Cordless Telephones, Caller ID, Electronic Telephones, Paging Systems	25 Feb 2017
38	The Telephone Circuit – Introduction, the Local Subscriber Loop	27 Feb 2017
39	Tutorial (G2,G1,G3)	27 Feb 2017
40	Telephone Message – Channel Noise and Noise weighting, Units of Power Measurement	1 March 2017
41	Tutorial (G3,G1,G2)	1 March 2017
42	Transmission Parameters and Private – Line Circuits	2 March 2017
43	Tutorial (G1,G2,G3)	4 March 2017
44	Voice Frequency Circuit Arrangements, Crosstalk	4 March 2017
UNIT-IV: Cellular Telephone Systems		
45	Introduction, First Generation Analog Cellular Telephone	6 March 2017
46	Tutorial (G2,G1,G3)	6 March 2017
47	Technical Fest	8 March 2017
48	Tutorial (G3,G1,G2)	8 March 2017
49	Tutorial (G1,G2,G3)	11 March 2017
50	Personal Communications Systems, Second Generation Cellular Telephone Systems	11 Mar 2017
51	N-AMPS, Digital Cellular Telephone	13 March 2017
52	Interim Standard	15 March 2017
53	Tutorial (G3,G1,G2)	15 March 2017
54	North American Cellular and PCS Summary, Global System for Mobile Communications	16 March 2017
55	Tutorial (G1,G2,G3)	18 March 2017
56	Personal Communications Satellite Systems, Data Communications Character Codes	18 March 2017
57	Bar Codes	20 March 2017
58	Tutorial (G2,G1,G3)	20 March 2017
59	Error Control, Error Detection, Error Correction	22 March 2017
60	Tutorial (G3,G1,G2)	22 March 2017
61	Character Synchronization	23 March 2017
62	Tutorial (G1,G2,G3)	25 March 2017
UNIT-V: Receivers		
63	Data Communications Equipment Introduction, Digital Service Unit and Channel Service Unit	25 March 2017
64	Voice-Band Data Communications Modems, Bell System – Compatible Voice-Band Modems, Voice Band Modem Block Diagrams	27 March 2017
65	Tutorial (G2,G1,G3)	27 march 2017
66	Voice Band Modem Classifications, Asynchronous Voice-Band Modems, Synchronous Voice-Band Modems	30 March 2017
67	56K Modems, Modem Control: The AT Command Set	3 April 2017
68	Cable Modems, Probability of Error and Bit Error Rate	5 April 2017
69	Tutorial (G3,G1,G2)	5 April 2017
70	Modem Synchronization, ITU-T Voice- Band Modem Specifications	6 April 2017

Text books:

1. "Introduction to Data Communications and Networking", Wayne Tomasi, Pearson Education
2. "Data and Computer Communications", Gurudeep S. Hura, Mukeshsinghal, CRC Press.

Reference books:

1. Data Communications and Networking, Behrouz A Forouzan, Fourth Edition, TMH

Name and signature of the faculty: Ms. PavaniGardas ----

Name and signature of Head of the Department: Mr Sandeep Kumar K ----

