Bhoj Reddy Engineering College for Women: Hyderabad

Department of Information Technology

Lesson plan of faculty member for the academic year 2017–18

Class: IV B Tech Branch-Section: ECE-B Semester: I

Subject: Computer Networks Lectures per week: 4+1 (Tutorial)

Lecture Number	Topics to be covered	Date (s)
UNIT – I: Overview of the Internet		
1	Protocol, Layering Scenario	12 July 2017
2	TCP/IP Protocol Suite, The OSI Model	14 July 2017
3	Tutorial (G2, G1, G3) - Topologies	12, 13, 15 July 2017
4	Internet history standards and administration	18 July 2017
5	Comparison of the OSI and TCP/IP reference model	19 July 2017
6	Physical layer guided transmission media, wireless transmission media	21 July 2017
7	Tutorial (G2, G1, G3) - Problems related to Addresses	19, 20, 22 July 2017
8	Data Link Layer - Design issues	24 July 2017
9	CRC codes	25 July 2017
10	Elementary Data Link Layer Protocols	26 July 2017
11	Sliding window protocol	28 July 2017
12	Tutorial (G2, G3, G1) – VRC and LRC	26, 27, 29 July 2017
UNIT-II: **Multi Access Protocol**		
13	ALOHA	31 July 2017
14	CSMA	1 August 2017
15	Collision free protocols	2 August 2017
16	Ethernet- Physical Layer	4 August 2017
17	Tutorial (G2, G1, G3) – Persistent methods	2, 3, 5 August 2017
18	Ethernet Mac Sub layer	7 August 2017
19	Data link layer switching	8 August 2017
20	Use of bridges, Learning bridges	9 August 2017
21	Spanning tree bridges	11 August 2017
22	Tutorial (G2, G1, G3) – Circuit Switching and Packet Switching	9,10,12 August 2017
23	Repeaters, hubs, bridges	16 August 2017
24	Switches, routers and gateways	18 August 2017
25	Tutorial (G2, G1, G3) – Communication Devices	16, 17, 19 August 2017
UNIT-III: **Network layer**		
26	Network Layer Design issues	21 August 2017
27	Store and forward packet switching	22 August 2017
28	Connection less and connection oriented networks	23 August 2017
29	Tutorial (G2, G1, G3) – Datagrams	23, 24, 26 August 2017
30	Routing algorithms	28 August 2017
31	Optimality principle, shortest path	29 August 2017
32	Flooding	30 August 2017
33	Distance Vector Routing	1 September 2017
34	Tutorial (G2, G1) – Routing Algorithms	30, 31 August 2017
35	Control to Infinity Problem	4 September 2017
36	Congestion control algorithms, admission control.	5 September 2017
37	Tutorial (G3) – Leaky Bucket Algorithm	9 September 2017
UNIT-IV: **Internetworking**		
38	Tunneling	11 September 2017
39	Internetwork Routing	12 September 2017
40	Packet fragmentation	13 September 2017
41	IPv4	15 September 2017
42	Tutorial (G2, G1, G3) - Fragmentation and Reassembly	13,14,16 September

43	IPv6 Protocol	18 September 2017
44	IP addresses, CIDR, IMCP	19 September 2017
45	ARP, RARP	22 September 2017
46	Tutorial (G1, G3) - Error Reporting Messages, ICMP	21,23 September 2017
47	DHCP	3 October 2017
48	Transport Layer: Services provided to the upper layers elements of transport protocol	4 October 2017
49	Addressing, connection establishment	6 October 2017
50	Tutorial (G2, G1, G3) - Addressing Mechanism	4,5,7 October 2017
51	Connection release	9 October 2017
52	Crash Recovery	10 October 2017
UNIT-V:		
53	The Internet Transport Protocols UDP	11 October 2017
54	RPC, Real Time Transport Protocols	13 October 2017
55	Tutorial (G2, G1) – RPC Mechanism	11,13 October 2017
56	The internet Transport Protocols – Introduction to TCP	12 October 2017
57	The TCP Service Model, The TCP Segment Header	16 October 2017
58	The connection establishment, The TCP connection release	17 October 2017
59	Tutorial (G1, G3) - Comparison of TCP and UDP	19, 21 October 2017
60	The TCP Connection Management Modelling	23 October 2017
61	The TCP Sliding Window	24 October 2017
62	The TCP Congestion Control, The future of TCP	25 October 2017
63	Application layer – Introduction, providing services, application layer paradigms	27 October 2017
64	Tutorial (G2, G1, G3) - Sender window and Receiver window	25, 26, 28 October 2017
65	Client server model, Standard client-server application	30 October 2017
66	FTP, electronic mail	31 October 2017
67	TELNET, HTTP	1 November 2017
68	DNS	3 November 2017
69	Tutorial (G2, G1) - HTTP Request and response	1, 2 November 2017
70	SSH	6 November 2017
71	Review of previous year question papers	7 November 2017

Text books:

1. Behrouz A Forouzan, “Data Communications and Networking”, 5/e, TMH, 2013.
2. Andrew S Tanenbaum, “Computer Networks”, 4/e, Pearson Education.

Name and signature of the faculty: Dr. C. Murugamani ----

Name and signature of Head of the Department: Mr. K. Sandeepkumar ----