Bhoj Reddy Engineering College for Women: Hyderabad

Department of Information Technology

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

Class: III B Tech Branch-Section: IT - B Semester: I

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

Lecture Number	Topics to be covered	Date (s)
UNIT – I: OSI Model		
1	Introduction	13 June 2016
2	Overview of internet, protocols	14 June 2016
3	Layering scenario, TCP/IP Protocol Suite	16 June 2016
4	Introduction to OSI Model	17 June 2016
5	Tutorial (G2, G1, G3) - OSI Model	13, 17, 18 June 2016
6	Layers of OSI Model	20 June 2016
7	Internet history standards & administration	21 June 2016
8	Comparison of OSI & TCP/IP reference model	23 June 2016
9	Physical Layer- Guided Transmission media	24 June 2016
10	Tutorial (G2, G1, G3) - TCP/IP Model	20, 24, 25 June 2016
11	Wireless transmission media	27 June 2016
12	Data link layer-CRC Codes	28 June 2016
13	Elementary Data Link Layer Protocols	30 June 2016
14	Sliding Window Protocol	1 July 2016
15	Tutorial (G2, G1, G3)– Revision of physical and data link layer	27 June, 1, 2 July 2016
UNIT – II: Data Link Layer		
16	Multiple Access protocols	4 July 2016
17	ALOHA , CSMA	5 July 2016
18	Multiple Access protocols	8 July 2016
19	Tutorial (G2, G1, G3)– ALOHA,CSMA	4, 8 ,9 July 2016
20	Collision free protocols ,Ethernet -physical layer	11 July 2016
21	Multiple Access Protocols, Ethernet – MAC sub layer	12 July 2016
22	Data link layer switching & use of Bridges	14 July 2016
23	Learning bridges	15 July 2016
24	Tutorial (G2, G1, G3)– MAC Sub layer	11, 15, 16 July 2016
25	Spanning tree bridges	18 July 2016
26	Repeaters, hubs	19 July 2016
27	Bridges, switches	21 July 2016
28	Routers & gateways	22 July 2016
29	Tutorial (G2, G1, G3) – Important questions of unit -II	18, 22, 23 July 2016
UNIT-III: Network Layer		
30	Network layer design issues	25 July 2016
31	Store and forward packet switching	26 July 2016
32	Connection less & connection oriented networks	28 July 2016
33	Routing algorithms Design issues	29 July 2016
34	Tutorial (G2, G1, G3)– Packet switching	25, 29 ,30 July 2016
35	Routing algorithms Design issues	2 August 2016
36	Optimality principle	4 August 2016
37	Shortest path	5 August 2016
38	Tutorial (G1, G3) – Congestion Algorithms	5, 6 August 2016
39	Flooding	16 August 2016
40	Distance vector routing,	18 August 2016
41	Count to infinity, Hierarchical routing	19 August 2016
42	Tutorial (G1, G3) –shortest path	19, 20 August 2016
43	Congestion control Algorithms, Admission control	22 August 2016
UNIT-IV: Transport Layer		

44	Internetworking - Tunneling	23 August 2016
45	Internetwork Routing	26 August 2016
46	Tutorial(G1, G2, G3) – Revision of Protocols	22, 23, 26 August 2016
47	Packet fragmentation	29 August 2016
48	IPv4 protocol	30 August 2016
49	IPv6 protocol	1 September 2016
50	IP Addresses, CIDR	2 September 2016
51	Tutorial(G1, G2, G3) - IPv4 protocol	29 August, 2, 3, September 2016
52	IMCP,DHCP	6 September 2016
53	ARP, RARP	8 September 2016
54	Transport layer	9 September 2016
55	Tutorial (G1, G3) – ARP, RARP	9, 10 September 2016
56	Services to upper layers elements	13 September 2016
57	Connection establishment	15 September 2016
58	Connection release	16 September 2016
59	Tutorial (G1, G3) - Connection Release	16, 17 September 2016
60	Crash Recovery	19 September 2016
UNIT-V : Application Layer		
61	Internet transport protocols - UDP	20 September 2016
62	Real time transport protocols	22 September 2016
63	Introduction to TCP	23 September 2016
64	Tutorial (G2, G1, G3) - UDP protocol	19, 23, 24 September 2016
65	TCP service model	26 September 2016
66	TCP segment header	27 September 2016
67	Connection establishment,	29 September 2016
68	Tutorial (G2, G3) – TCP header	26 September 2016, 1 October 2016
69	TCP Connection release TCP segment header	3 October 2016
70	TCP Connection management modeling	4 October 2016
71	Tutorial (G2) - Congestion control	3 October 2016
72	TCP sliding window	27 October 2016
73	TCP congestion control	28 October 2016
74	Future of TCP Congestion Control	29 October 2016
75	Tutorial (G1, G3)- Application layer	28, 29 October 2016
76	Application layer- introduction	31 October 2016
77	Providing services Application layer paradigms	1 November 2016
78	Client server model , HTTP, FTP	2 November 2016
79	TELNET,DNS,SSH	3 November 2016
80	Tutorial (G2, G1, G3) - Standard client-server application Client server model	31 October, 3 November 2016

Text books:

1. Data communications and networking- Behrouz A Forouzan, 5th edition TMH 2013.
2. Computer Networks- Andrew S Tanenbaum, 4th edition, Pearson Education

Name and signature of the faculty: Nitya E ----

Name and signature of Head of the Department: G Srinivas Rao ----