

MCA I Year II Semester Subject Code: 24MCA2011 Computer Networks Lab

Contact Hours	Exp. No.	Topic Description	Teaching Methodology	Remarks
1-3	1	Implementation of Different Data Link Framing Methods	Lab Practice	
4-6	2	Implementation of Error Detection Techniques (Parity, CRC, Checksum)	Lab Practice	
7-9 & 10-12	3	Implementation of Routing Algorithms (DVR, Bellman-Ford, etc.)	Lab Practice	
13-15	4	Implementation of Congestion Control Algorithms	Lab Practice	
16-18 & 19-21	5	Implementation of IPC – a. Pipes, b. FIFO	Lab Practice	
22-24	6	Mutual Exclusion with Semaphores – Avoid Race Conditions	Lab Practice	
25-27	7	Design of TCP Client and Server Application	Lab Practice	
28-30	8	Design of UDP Client and Server Application	Lab Practice	
31-33 & 34-36	9	Implementation of Basic Networking Commands (ping, netstat, tracer, etc.)	Lab Practice	
37-39	10	Design of Basic Protocol Header Using Structure and Bit Fields	Lab Practice	
40-42 & 43-45 & 46-48	11	Network Simulation Using CISCO Packet Tracer (Topology, IP Config, Routing)	Lab Practice	