Lovely Professional University, Punjab

Course Code	Course Title	Course Planner	Lectures	Tutorials	Practicals	Credits
CSE307	COMPUTER NETWORKS LABORATORY	22204::Awadhesh Kumar Shukla	0	0	2	1
Course Weightage	ATT: 5 CAP: 45 ETP: 50	**Exam Category: X6: Mid Term Exam: Not Applicable – End Term Exam: Practical**				
Course Orientation	KNOWLEDGE ENHANCEMENT, PLACEMENT EXAMINATION, SKILL ENHANCEMENT					

	TextBooks (T)		
Sr No	**Title**	**Author**	**Publisher Name**
T-1	COMPUTER NETWORKS	ANDREW S. TANENBAUM	PEARSON

	Reference Books (R)		
Sr No	**Title**	**Author**	**Publisher Name**
R-1	DATA COMMUNICATION AND NETWORKING	BEHROUZ A. FOROUZAN	MCGRAW HILL EDUCATION

Relevant Websites (RW)		
Sr No	**(Web address) (only if relevant to the course)**	**Salient Features**
RW-1	http://engweb.info/cisco/Packet%20Tracer%20Tutorials.html	Packet Tracer Tutorial

Audio Visual Aids (AV)		
Sr No	**(AV aids) (only if relevant to the course)**	**Salient Features**
AV-1	http://nptel.ac.in/video.php?subjectId=106105081	Provides the audio video link for topics of Computer Networks

Virtual Labs (VL)		
Sr No	**(VL) (only if relevant to the course)**	**Salient Features**
VL-1	Packet Tracer	These are the network simulators to create and simulate the data transmission on various network topologies

*Each experiment of the lab will be evaluated using following relative scheme:

Component	Weightage (%)
Performance/Job evaluation/conduct/skill execution/demonstration	50
Viva	50

An instruction plan is only a tentative plan. The teacher may make some changes in his/her teaching plan. The students are advised to use syllabus for preparation of all examinations. The students are expected to keep themselves updated on the contemporary issues related to the course. Upto 20% of the questions in any examination/Academic tasks can be asked from such issues even if not explicitly mentioned in the instruction plan.

Detailed Plan For Practicals

Practical No	Broad topic	Subtopic	Other Readings	Learning Outcomes
Practical 1	Network hardware and IP addressing concept	Working of hub, switch and Router, Adding of interfaces in devices	AV-1	Knowledge about various network hardware
Practical 2	Network hardware and IP addressing concept	IP addressing basics, configuration using CLI, VLSM and FLSM on single router	RW-1 VL-1	Knowledge about IP addressing
Practical 3	Network hardware and IP addressing concept	Implementation of Star, Mesh, Bus and Hybrid Topology	RW-1 VL-1	Knowledge of various network topology
Practical 4	Network Commands	Ping, tracert, arp, netstat, ipconfig, ftp, nslookup, snmpget, snmpgetbulk and snmpset (use DOS and scenario based configuration)		Knowledge of various network troubleshooting commands
Practical 5	Network layer routing protocols	Implementation of Static Routing using Classfull and classless (FLSM)		Knowledge of classless and classfull addressing
Practical 6	Network layer routing protocols	Implementation of Static Routing using VLSM		Knowledge of static routing
Practical 7	Network layer routing protocols	Routing information Protocol(RIP) using classfull and classless (FLSM)		Knowledge of dynamic routing
Practical 8	Network layer routing protocols	Routing information rotocol(RIP) using VLSM		Knowledge of dynamic routing using VLSM
Practical 9	Server Configuration and LAN Setup	Implementation of FTP, Implementation of HTTP and Email setup on server	AV-1	Knowledge implementing application layer protocols
Practical 10	Server Configuration and LAN Setup	Implementation of DNS, Implementation of DHCP		Knowledge implementing application layer protocols
Practical 11	Server Configuration and LAN Setup	Implementation of LAN with configuration of inter-networking devices and any application layer protocol	RW-1 VL-1	Knowledge implementing application layer protocols
Practical 12	IPv6 addressing and routing	IPv6 Addressing & Stateless Address Auto Configuration (SLAAC)		Knowledge about IPV6 addressing
	IPv6 addressing and routing	IPv6 Neighbor Discovery		Knowledge about IPV6 addressing
Practical 13	IPv6 addressing and routing	IPv6 Static Routing		Knowledge about IPV6 static routing
Practical 14	IPv6 addressing and routing	IPv6 Dynamic Routing		Knowledge about IPV6 dynamic routing
	SPILL OVER			
Practical 15	Spill Over			