



# Sardar Patel Institute of Technology

Bhavan's Campus, Munshi Nagar, Andheri (West), Mumbai-400058-India

(Autonomous Institute Affiliated to University of Mumbai)

Course Code	Course Name	Teaching Scheme (Hrs/week)			Credits Assigned				
		L	T	P	L	T	P	Total	
CPCL504	Computer Networks Lab	--	--	2	--	--	1	1	
		Examination Scheme							Total
		ISE		ESE		-			
		40		Practical	Oral				
		20				60			

<b>Pre-requisite Course Codes</b>	CPC504 (Computer Networks)
-----------------------------------	----------------------------

At end of successful completion of this course, student will be able to

Course Outcomes	CO1	Acquire the ns2 to simulate the network protocols.
	CO2	Use appropriate network tools to build network topologies
	CO3	Test simple protocols in a laboratory scenario.
	CO4	Implement Application layer network protocols.

Exp. No.	Experiment Details	Ref.	Marks
1	Study of i) ns2 network simulator and its Installation over Linux OS and ii) Graph Theory for computer network.	1,2	5
2	Study all network topologies viz. Bus, Star, Ring and Mesh etc. and their simulation using ns2 simulator.	1,2	5
3	Simulate Stop and Wait Protocol using ns2 simulator for the given scenario.	1,2	5
4	Simulate Sliding Window Protocol using ns2 simulator for the given scenario.	1,2	5
5	Write a C/C++ program for the simulation of Cyclic Redundancy Check and Hamming codes for the given scenario.	1,2	5
6	Simulate Link state routing protocol in C/C++ language for the given scenario.	1,2	5
7	Simulate Distance vector routing protocol in C/C++ language for the given scenario.	1,2	5
8	Implement the following two application servers: a) A tinny FTP server (tftpsvr) which accepts a connection from a client program (cftp). It accepts upto 5 connection simultaneously. It supports only three basic operations. viz. i) get <source><destination> ii) put <source><destination>	1,2	5



# Sardar Patel Institute of Technology

Bhavan's Campus, Munshi Nagar, Andheri (West), Mumbai-400058-India  
(Autonomous Institute Affiliated to University of Mumbai)

	iii) quit. b) A web server using HTTP protocol for Name-based virtual hosting for the given scenario.		
<b>Total Marks</b>			<b>40</b>

## References:

- [1] A.S. Tanenbaum, "*Data Communications and Networking*", Pearson Education, FOURTH Edition.
- [2] Behrouz Forouzan, "*Data Communications and Networking*", McGraw-Hill, FOUURTH Edition.
- [3] M. A. Gallo and W. M. Hancock, "*Computer Communications and Networking Technologies*", Cengage Learning (Indian Edition), FIRST Edition.
- [4] Natalia Olifer & Victor Olifer, "*Computer Networks: Principles, Technologies & Protocols for Network Design*", Wiley India, 2011.
- [5] Larry L. Peterson, Bruce S. Davie, "*Computer Networks: A Systems Approach*", The Morgan Kaufmann Series in Networking.
- [6] James F. Kurose, Keith W. Ross, "*Computer Networking*", Pearson, SIXTH Edition.
- [7] Srinivasan Keshav, "*An Engineering Approach To Computer Networking: Atm Networks, The Internet*", Addison-Wesley Professional Computing Series.