

19CS3451

**Computer Networks Lab**

<b>Offering Branches</b>	CSE		
<b>Course Category:</b>	Program Core	<b>Credits:</b>	1
<b>Course Type:</b>	Practical	<b>Lecture-Tutorial-Practical:</b>	0-0-2
<b>Prerequisites:</b>	NIL	<b>Continuous Evaluation:</b>	25
		<b>Semester End Evaluation:</b>	50
		<b>Total Marks:</b>	75
<b>Course Content</b>			
<b>Expt No</b>	<b>Contents</b>		
1.	Identify different types of Network devices/cables and Practically implement the cross-wired cable and straight through cable using crimping tool.		
2.	Demonstrate connectivity of wired & wireless devices in Local Area Network using Hub, Switch and Router.		
3.	Experiment with the basic network commands like Ping, IPCONFIG, and Tracert in real networks.		
4.	Analyze Network Traffic Using Wireshark tool/ TCP dump tool		
5.	Implement Framing Mechanism using any Programming Language.		
6.	Implement Error Detection technique using any Programming Language.		
7.	Experiment with configuration of Host IP, Subnet Mask and Default Gateway of a device in LAN and establish Peer to Peer network connection.		
8.	Demonstrate Static and Dynamic Addressing Mechanisms.		
9.	Implement Unicast Routing Algorithm using any Programming		

	Language.	
<b>10.</b>	Demonstrate Network Address Translation (NAT)	
<b>11.</b>	Show the working of Application Layer Protocols - FTP, DNS, Telnet	
<b>12.</b>	Case study: Analyze, Design and build a network for an organization using Network Simulation tool.	
<b>Learning Resources</b>		
<b>Text Books</b>		
1. Data Communications and Networking, Behrouz A. Forouzan, Fifth Edition, 2013, McGraw-Hill.		
<b>e- Resources &amp; other digital material</b>		
1. <a href="https://www.youtube.com/channel/UCKXx22vOENUyHrVAADq7Z_g/videos">https://www.youtube.com/channel/UCKXx22vOENUyHrVAADq7Z_g/videos</a> 2. <a href="https://www.coursera.org/learn/computer-networking">https://www.coursera.org/learn/computer-networking</a> 3. <a href="https://www.udacity.com/course/computer-networking--ud436?cjevent=34367a88b5dc11ea81f900ef0a180513">https://www.udacity.com/course/computer-networking--ud436?cjevent=34367a88b5dc11ea81f900ef0a180513</a>		