

INDIAN INSTITUTE OF TECHNOLOGY ROORKEE

NAME OF DEPT./CENTRE: **Computer Science and Engineering**

1. Subject Code: **CSN-361** Course Title: **Computer Networks Laboratory**

2. Contact Hours: **L: 0 T: 0 P: 3**

3. Examination Duration (Hrs.): **Theory:0 Practical :0**

4. Relative Weight: **CWS:0 PRS:100 MTE:0 ETE:0 PRE:0**

5. Credits: **2** 6. Semester : **Autumn** 7. Pre-requisite: **CSN-341**

8. Subject Area: **DCC**

9. Objective: To design program and configure various hardware and software components of computer networks, including protocols.

10. Details of the Course:

Sl. No.	Contents	Contact Hours
	Socket programming using RPC and RMI. Cryptography algorithms, DES, RSA, and digital signatures. Implementation of various LAN protocols and configurations. Network simulation using the NS2 package. Network simulation using the Qualnet software. Configuration of PC as router and switch.	14 x 3
	Total	42

11. Suggested Books:

S. No.	Name of Authors / Books / Publishers	Year of Publication/ Reprint
1.	Tanenbaum, A.S., "Computer Networks", 4 th Ed., Pearson Education.	2003
2.	Forouzan, B.A., "Data Communication and Networking", 4 th Ed., Tata McGraw-Hill.	2006
3.	Stallings, W., "Cryptography and Network Security: Principles and Practice", 4 th Ed., Prentice-Hall of India.	2006
4.	Stallings, W., "Data and Computer Communication", 8 th Ed., Prentice-Hall of India.	2007
5.	Stevens, W. R., "Unix Network Programming: Vol. II", 2 nd Ed., Pearson Education	2002