



**GALGOTIAS EDUCATIONAL INSTITUTIONS**  
**1, Knowledge Park-II, Greater Noida, Uttar Pradesh, 201310**

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**Experiment Lists**

1. Implementation of Stop and Wait Protocol and Sliding Window Protocol.
2. Study of Socket Programming and Client – Server model.
3. Write a code simulating ARP /RARP protocols.
4. Write a code simulating PING and TRACEROUTE commands.
5. Create a socket for HTTP for web page upload and download.
6. Write a program to implement RPC (Remote Procedure Call).
7. Implementation of Subnetting.
8. Applications using TCP Sockets like a. Echo client and echo server b. Chat c. File Transfer.
9. Applications using TCP and UDP Sockets like d. DNS e. SNMP f. File Transfer.
10. Study of Network simulator (NS).and Simulation of Congestion Control Algorithms using NS.
11. Perform a case study about the different routing algorithms to select the network path with its optimum and economical during data transfer.
  - i. Link State routing
  - ii. Flooding
  - iii. Distance vector
12. To learn handling and configuration of networking hardware like RJ-45 connector, CAT-6 cable, crimping tool, etc.
13. Configuration of router, hub, switch etc. (using real devices or simulators)
14. Running and using services/commands like ping, traceroute, nslookup, arp, telnet, ftp, etc.
15. Network packet analysis using tools like Wireshark, tcpdump, etc.
16. Network simulation using tools like Cisco Packet Tracer, NetSim, OMNeT++, NS2, NS3, etc.
17. Socket programming using UDP and TCP (e.g., simple DNS, data & time client/server, echo client/server, iterative & concurrent servers)