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Course Code: CSE323R01

COMPUTER NETWORKING PRINCIPLES & COMPONENTS LABORATORY

Course Objectives

This course will help the learner to understand the network simulator environment. Also the learner will be able to understand working principle of various communication protocols and visualize the network protocol performance metrics.

List of experiments

1. Simulation and analysis of Wired Network in NS2/NS3
2. Simulation and analysis of Wireless Network in NS2/NS3
3. Implementation of error-detection technique - CRC
4. Implementation of error-correction technique - Hamming code
5. Implementation and analysis of Sliding window protocols
6. Implementation of Dynamic Host Configuration Protocol
7. Implementation and analysis of Distance vector routing
8. Implementation and analysis of Link State Routing
9. Implementation and analysis of Leaky bucket and Token bucket congestion control algorithms
10. Implementation of DNS lookup
11. Implementation of secured file transfer
12. Study of SASTRA network infrastructure

COURSE LEARNING OUTCOMES

Upon successful completion of this course, the learner will be able to:

CO No.	Course Outcomes	Knowledge Level
1	Demonstrate wired and wireless network simulation	K3
2	Differentiate error detection and error correction techniques	K4
3	Analyse the performance of flow control techniques	K4
4	Compare various adaptive routing protocols	K4
5	Demonstrate various congestion controls algorithms	K4
6	Analysis of application layers services	K4