

Guidelines for B.Sc. (Hons) Computer Science, CBCS – III Semester

C-VII: Computer Networks

Sr. No.	Topic	Chapter Sections/ Pages	References	No. of Lectures
1.	Introduction to Computer Networks	1.1 to 1.2, 2.1 to 2-4	[1]	6
2.	Data Communication Fundamentals and Techniques	3.1, 3.4 to 3.5, 4.1 except multilevel and multi transition line encoding, 4.2 upto encoding, 4.3, 5.1, 6.1 upto multiplexing process, pg.169 to 170, 7.1 to 7.2	[1]	10
3.	Network Switching Techniques and Access Mechanisms	2.5.5	[2]	5
		9.2 to 9.3, 9.5	[1]	
4.	Data Link Layer- Functions and Protocols	3.1 to 3.2	[2]	11
		11.3 to 11.5, 11.7 upto transition phase	[1]	
5.	Multiple Access Protocols and Networks	4.2.2, 4.3 upto 4.3.1, 4.3.3 to 4.3.4	[2]	7
		15.1 to 15.2	[1]	
6.	Network Layer Functions and Protocols	5.1 to 5.2.4, 5.6.1, 5.6.2 upto Subnets, 5.6.3	[2]	10
7.	Transport Layer Functions and Protocols	6.1.1, 6.4 upto 6.4.1, 6.5 upto 6.5.6	[2]	6
8.	Overview of Application Layer Protocols	7.1 upto 7.1.1, 7.3 upto URLs, 7.3.4	[2]	5

References:

[1] Data Communication and Networking : B. A. Forouzan, 4th Edition, TMH, 2007.

[2] Computer Networks : Andrew S. Tanenbaum, 4th Edition, Pearson Education, 2003.

Computer Science LAB (C-VII) : Computer Networks Lab

Revised Practical List

Practical: 60 Lectures

1. Simulate Cyclic Redundancy Check (CRC) error detection algorithm for noisy channel.
2. Simulate Hamming code for a given input message.
3. Simulate and implement stop and wait protocol for noisy channel.
4. Simulate and implement go back n sliding window protocol.
5. Simulate and implement selective repeat sliding window protocol.
6. Simulate Classful Addressing by taking the IP address (Dotted-Decimal notation) as input and print the corresponding class.