PART A- Guidelines for B.Sc. (Hons) Computer Science, LOCF – III Semester

Paper Code:- (BHCS07), Paper Title:- Computer Networks

Unit	Topic	Chapter Sections/ Pages	References	No. of Lectures
I	**Introduction**	1.1 to 1.3	[1]	3
II	**Network Architecture Models**	2.2 to 2.3	[1]	3
III	**Physical Layer**	3.1, 3.2.6, 3.3.1, 3.3.2, 3.4 to 3.5, 4.1- 4.1.1, 4.1.2 till pg. 105(except multilevel and multi transition line encoding), 5.1, 6.1 - 6.1.1 upto pg. 159, 6.1.2, 6.1.3 upto pg. 165, 7.1 to 7.3	[1]	10
IV	**Data Link MAC Layer**	2.6.5, 3.1 to 3.2	[2]	23
		11.2, 11.4- 11.4.1. 11.4.2, 11.4.3	[1]	
		3.4 4.2.2, 4.3- 4.3.1, 4.3.2	[2]	
		17.1	[1]	
V	**Network layer**	5.1, 5.2- 5.2.4, 5.2.5 5.6.1, 5.6.2 , 5.6.4	[2]	10
		18.2, 22.1.1, 22.1.2	[1]	
VI	**Transport and Application Layer**	6.1.1, 6.4 upto 6.4.1, 6.5 upto 6.5.6, 6.5.8	[2]	6
		23.1 upto 695,	[1]	
VII	**Protocols**	26.2,26.4	[1]	5
		7.1 upto 7.1.1, 7.2.4, 7.3- 7.3.1 till pg. 658 (before Cookies), 7.3.2 till pg. 670 (upto Inputs and Forms), 7.3.4	[2]	

References:

[1] Data Communication and Networking : B. A. Forouzan, 5th Edition (Copyright 2013),TMH.
[2] Computer Networks : Andrew S. Tanenbaum, 5th Edition (Copyright 2011),Pearson Education.

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PART B- COMPUTER NETWORKS Practical List

1. Simulate Cyclic Redundancy Check (CRC) error detection algorithm for noisy channel.
2. Simulate and implement stop and wait protocol for noisy channel.
3. Simulate and implement go back n sliding window protocol.
4. Simulate and implement selective repeat sliding window protocol.
5. Simulate and implement distance vector routing algorithm
6. Simulate and implement Dijkstra algorithm for shortest path routing.