1.	Title of the course	Computer Networks Laboratory
2.	Course number	CS306P
3.	Structure of credits	0-0-3-2
4.	Offered to	UG
5.	New course/modification to	Modification To CS3292/8
6.	To be offered by	Department of Computer Science and Engineering
7.	To take effect from	July 2022
8.	Prerequisite	Nil
9.	**Course Objective(s):** To provide a practical knowledge on conceptual understanding, design, and evaluation of different standard network layer protocols, and study their performances.	
10.	**Course Content:** Introduction to different network-related tools and commands; Physical layer: Amplitude, frequency, and phase modulation and demodulation techniques; Link layer: Cyclic redundancy check, and modelling and simulation of random medium access control protocols; Network layer: Checksum, subnetting, routing, virtual local area network, and network address translation; Transport layer: Socket programming, simulation and performance study of user datagram and transmission control protocols; Application layer: Hypertext transfer protocol, simple mail transport protocol, dynamic host configuration protocol, and domain name service; Wireshark: packet filtering and analysis; Designing and functionality study of firewall and proxy servers.	
11.	**Textbook(s):** 1. Chappel L, *Troubleshooting with Wireshark*, Wireshark Solutions Series Book (2014). 2. Kurose J and Keith Ross, *Computer Networking: A Top Down Approach*, Pearson (2016).	
12.	**Reference(s):** 1. Stevens R, Fenner B and Rudoff A, *Unix Network Programming - Vol I*, Pearson (2015).	