1.	Title of the course	Computer Networks
2.	Course number	CS306L
3.	Structure of credits	3-0-0-3
4.	Offered to	UG
5.	New course/modification to	Modification To CS3202/8
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 teach the fundamental concepts of different open systems interconnection layers of network protocol stack, and provide an understanding on the factors that influence the network performance.	
10.	**Course Content:** Physical layer: Signal representation, modulation, encoding, Shannon's capacity; Link layer: Framing, medium access control, error detection and correction, and reliable service; Network layer: Address resolution protocol, forwarding, scheduling discipline, routing (including border gateway protocol), virtual local area network, Internet protocol version 4 (IPv4), a brief introduction to IPv6 and tunnelling, and network address translation; Transport layer: Reliable end-to-end protocol designs, network sockets, user datagram protocol, transmission control protocol's congestion and flow control mechanisms; Application layer: Hypertext transfer protocol, simple mail transfer protocol, client-server and peer-to-peer architectures, dynamic host configuration protocol, and domain name service; Basics of network security: Symmetric, asymmetric, and block ciphers, and firewalls.	
11.	**Textbook(s):** 1. Kurose J and Keith R, *Computer Networking: A Top Down Approach*, Pearson (2016). 2. Peterson L L and Davie B S, *Computer Networks: A Systems Approach*, Morgan Kaufmann Series in Networking (2011).	
12.	**Reference(s):** 1. Bertsekas D, *Gallager R, Data Networks*, Pearson (2015). 2. Kumar A, Manjunath D and Kuri J, *Wireless Networking*, Morgan Kaufmann (2014).	