CSE 3151: COMPUTER NETWORKS

Total Credit	:	03
Total Marks	:	75
Total no of Weeks	:	13
Final Exam	:	52½ (70% of total marks)
		Part- A — 26¼
		Part- B — 26¼
Quiz/CT	:	15 (20% of total marks)
Attendance	:	7½ (10% of total marks)
Course Teacher	:	Dr. ASIF ZAMAN, Associate Professor, CSE RU
Class Room	:	219
Class Schedule	:	As mentioned in class routine.

Weeks	Contents	Materials
1	Fundamental Ideas about Computer Networks, Computer Networks and Applications, OSI reference model, TCP/IP model and terminology, Connectionless and Connection Oriented services, Service primitives, The ARPANET	https://sites.google.com/site/asifzaman3180/lecture-slides
2		
3	**Physical Layer:** Circuit switching and Packet switching, X-25 protocol, Frame relay and Cell relay, ATM reference model.	
4	**CLASS TEST-1** **Medium Access Sublayer:** Pure and slotted ALOHA, Persistent and Non-persistent CSMA, CSMA with collision detection and collision free protocols, IEEE standard 802.3 and Ethernet.	
5		
6	**Data Link Layer:** Types of errors, framing, error detection & correction methods; Flow control, Stop & wait ARQ, Go-Back- N ARQ, Selective repeat ARQ, HDLC.	
7		
8	**Network Layer:** Internet address, classful address, subnetting, static vs. dynamic routing, shortest path algorithm, flooding, distance vector routing, link state routing, ARP, RARP, IP, ICMP.	
9		
10	**Transport Layer:** UDP, TCP, Connection management, Addressing, Establishing and Releasing Connection, Congestion control algorithm, Flow control and Buffering, Multiplexing.	
11	**Presentation Layer:** Data Compression techniques, Frequency Dependent Coding, Context Dependent Encoding.	
12	**Presentation Week**	
13	**Application Layer:** Internet and intranets, Internet services and goals, DNS, SMTP, FTP, Telnet, HTTP, World Wide Web (WWW), DHCP and BOOTP. **Networking in Practice:** Designing LAN, Cabling, Establishing Client- Server network, Configuring: Directory Server, Proxy server, FTP server, E-mail server, web server, DB server, Firewall, Network troubleshooting, network maintenance, network monitoring, Network programming.	