| Paper Code:<br>HCSCR3071T | Computer Networks<br>(Theory) | Marks: 100 |
|---|---|---|
| Serial | Topic | No. of Periods |
| | **GROUP-A** | **32** |
| 1. | **Introduction to Computer Networks**<br>Network definition; network topologies; network classifications; network protocol; layered network architecture; overview of OSI reference model; overview of TCP/IP protocol suite. | 10 |
| 2. | **Physical Layer Functionalities**<br>Transmission Media. Multiplexing: FDM, TDM and Applications. Switching Techniques: Circuit, Message and Packet Switching. Encoding Techniques. | 13 |
| 3. | **Data Link Layer Functions and Protocol**<br>Error detection and error correction techniques; data-link control- framing and flow control; error recovery protocols: Stop and wait ARQ, Go-back-n ARQ, Selective repeat ARQ. | 10 |
| | GROUP-B | 33 |
| 4. | **Multiple Access Protocol and Networks**<br>Carrier and non carrier sense protocols; IEEE 802.X – Introduction, architecture, protocol and management of Ethernet and token ring. | 11 |
| 5. | **Networks Layer Functions and Protocols**<br>Datagram and Virtual circuit switching techniques; IP addressing: Concepts, classification, subnetting in IPv4. | 11 |
| 6. | **Transport Layer Functions and Protocols**<br>Transport services- error and flow control, Connection establishment and release- three way handshake. | 6 |
| 7. | **Overview of Application layer protocol**<br>Overview of WWW & HTTP protocol. | 5 |
| | **Total** | 65 |
| | **Reference Books :**<br>1. B. A. Forouzan: Data Communications and Networking, Fifth edition, THM , 2012.<br>2. A. S. Tanenbaum: Computer Networks, Fifth edition, PHI , 2010. | |