

# **COMPUTER NETWORK**

## **MINOR-2**

### **SYLLABUS:-**

1. **NETWORK DEVICES:-**

Basic terminology of computer networks - bandwidth, physical and logical topologies, Media – 10 base Z, 10base S, 10base T, 100baseTX, 100base FX, 1000baseLX and wireless. LAN & WAN devices – Router, bridge, Ethernet switch HUB, Modem.

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2. **PHYSICAL LAYER:-**

Representation, one bit on physical modem i.e. in wired network, optical Network and wireless N/W, Encoding / Modulation – Manchester Encoding, AM, FM and PM. Dispersion, Jitter, Latency and collision. Different types of Media – Shielded twisted pair, Unshielded twisted pair, Coaxial cable, Optical Fiber cable and wireless.

3. **NETWORK LAYER:-**

Network layer addressing, Network-layer data gram, IP addressed classes. Subnetting – Sub network, Subnet mask. Routing algorithm – optimality Principle, Shortest path routing, Hierarchical routing, Broadcast routing, Multicast routing, tunneling Fragmentation and DHCP. Routing Protocol – RIP, IGRP, OSPF and EIGRP.

4. **TRANSPORT LAYER:-**

Layer 4 Protocol TCP & UDP. Three-way handshakes open connection. Session Layer design issue, Presentation layer design issue, and Application layer design issue.

5. **APPLICATION LAYER:-**

Application Layer protocols: TELNET, FTP, HTTP,SNMP, DNS, SMTP, FTP, HTTP, WWW and recent development.

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