Question Bank
Data Communication and Computer Network (22414)

UNIT 1:

1) List and describe the process of data communication in various modes.
2) Define Protocol in computer network. State the need of Protocol. Give the name of any two Protocols.
3) Compare Analog and Digital signals.
4) Define Computer Network and state its types. State the need of computer network.
5) List any four benefits of computer network.
6) Compare LAN vs WAN vs MAN on basis of Speed, Congestion, Maintenance, and Area Coverage.
7) Classify the network based on geographical area and transmission technology.
8) State any four advantages of peer-to-peer network over client-server network.
9) With neat diagram explain client-server network wit its advantages and disadvantages.
10) Describe pros and cons of peer-to-peer network and client-server network.
11) Define bit rate and baud rate.

UNIT 2:

1) State the factors to be considered for selecting transmission media.
2) Compare guided transmission and unguided transmission media. Write applications of guided transmission media and unguided transmission media.
3) Why the network cable is twisted.
4) Compare UTP with STP on basis of Noise, Ease of Handling, Cost, and Speed, Attenuation.
5) What is cross over cable and straight through cable? Give colour code (pin configuration) for both and write the steps to create cross over cable.
6) Draw a neat sketch and describe the construction of co-axial cable. State any two advantages and disadvantages of coaxial cable.
7) Draw a neat structural diagram of Fiber optic cable & state its types.
8) Describe any four physical characteristics of Fibre Optic Cable.
9) Compare fibre optic cable with copper cable.
10) Explain microwave communication with diagram. Give any two applications of microwave communication.
11) Define Multiplexing. State its types.
12) What advantages does TDM have over FDM in a circuit switched network? /
13) Describe the working principle of Packet switching and Circuit switching techniques with neat diagram.

UNIT 3:

1) Define Redundancy.
2) Describe Forward Error Correction.
3) Describe working of CRC with suitable example.
4) Describe various IEEE standards for network topologies.
5) Compare Token passing with CSMA/CD.
6) With neat diagram explain the ESS architecture of IEEE 802.11