**Unit No. I**

1. Discuss the evolution of computer networks.
2. State and explain various types of networks.
3. Differentiate between LAN, MAN and WAN.
4. What is NIC? State its features,
5. State the functionalities of Modem.
6. Write a short note on Hub.
7. What is a bridge? state its functioning & working.
8. Explain in brief about L1 and L2 Switches.
9. Describe the working of a router?
10. Differentiate between Hub, switch and router.
11. What are Protocols and Standards in Networking?
12. What is OSI Model? Explain its Layered architecture.
13. State and explain the Functions of the following Layers:
14. Physical Layer
15. Data Link layer
16. Network Layer
17. Transport Layer
18. Session Layer
19. Presentation Layer
20. Application layer
21. Write a short note on TCP/IP Model.

**Unit No. II**

1. Define:
2. Analog signal
3. Digital signal
4. Periodic signal
5. Non- periodic signal
6. Peak Amplitude
7. Define the following terms:
8. Time period
9. Frequency
10. Wavelength
11. Bandwidth
12. Bit rate.
13. What are the different types of Transmission Impairments?
14. State the design issues of Data link layer.
15. What are errors? Explain the types of errors.
16. What is Block Coding? Explain Error detection and correction in block coding.
17. Explain CRC Method in detail.
18. Describe the architecture of IEEE 802.11 in detail.
19. Sketch & Explain the MAC Sublayers of IEEE 802.11.
20. Explain the Hidden station and exposed station problem.
21. Explain the two types of networks in Bluetooth.
22. Demonstrate the Bluetooth architecture with its Layers.
23. What is Cellular Telephony? Explain the procedure of Transmitting and receiving.
24. Explain the Concept of Frequency Reuse and Handoff in Cellular Telephony.
25. Describe the Second Generation of Cellular Telephone network.
26. Describe the Third Generation (3G) of Cellular Telephone network.
27. State the Features of Fourth generation (4G) Telephone network.
28. Write a short note on:
29. Geostationary satellite (GEO)
30. Low Earth Satellite (LEO)

**Unit No. III**

1. What is IPv4 Adress? Describe its Address space and its notations.
2. Describe classful addressing in detail.
3. What do you mean by Classless addressing?
4. Find the class of each address:

a. 00000001 00001011 00001011 11101111

b. 11000001 10000011 00011011 11111111

c. 10100111 11011011 10001011 01101111

d. 11110011 10011011 11111011 00001111

1. Find the class of each address:

a. 227.12.14.87

b. 193.14.56.22

c. 14.23.120.8

d. 252.5.15.111

1. Draw and Explain IPv4 Datagram format.
2. State the use of ARP protocol with its functionality.
3. Describe the datagram format of ARP packet.
4. Write a short note on Internet Control Message Protocol (ICMP).
5. State the advantages of using IPv6 Over IPv4.
6. Draw and Explain IPv6 Header format.
7. Differentiate between IPv4 and IPv6.
8. Explain Distance Vector Routing Protocol.
9. Write a short note on OSPF.
10. Describe the Border Gateway Protocol (BGP) in detail.

**Unit No. IV**

1. Differentiate between connection oriented and connection less service.
2. What is UDP? Explain the header format for a datagram.
3. Write a short note on UDP.
4. List the uses of User Datagram protocol.
5. Write a short note on Transmission control protocol (TCP).
6. Explain the TCP Segment Format.
7. Describe the three-way handshaking in TCP for connection establishment.
8. Write a short note on SCTP.
9. List the differences between SCTP packet and a TCP segment.
10. Differentiate between UDP and TCP.

**Unit No. V**

1. Explain the architecture of World Wide web (WWW).
2. What are Cookies and URL?
3. Write a short note on HTTP.
4. What do you mean by Domain Name system? Explain its components.
5. Explain the following terms:
6. Name space
7. Domain
8. Domain Name
9. Label
10. Zone
11. Explain Simple Mail Transfer Protocol (SMTP).
12. What do you mean by Internet Mail Access Protocol (IMAP)?
13. What is DHCP? Explain the DHCP packet format in detail.
14. Write a short note on Secure Socket Shell (SSH).
15. Write a short note on File Transfer Protocol (FTP).