Computer Networks

Question Bank Unit 1

1. What are Network layer services?
2. Parameters of Network layer.
3. What are different Classes in IP addressing.
4. What is subnetting?
5. Solve the example and find out the subnet.

210.20.10.12

20.29.29.20

7. Explain in detail about sockets.

8. What is the major difference between DGRAM and STREAM?

9. IP packet format.

10. Specifications of IPV4 and IPV6.

11. Draw the header of IPV4 .

12.Explain ARP, RARP, ICMP.

13. What will be the class, subnet, number of ip addresses, last ip address and first ip address for the following?

18.19.10.17

210.12.134.23

Question Bank Unit 2

1. What is TCP and UDP?

2. Parameters of TCP.

3. Parameters of UDP.

4. Explain the difference between various sockets.

5. What are TCP - services, segments?

6. Write a code to create a TCP socket.

7. Write a code on UDP socket.

8. How is flow control done in the Transport layer ?

9. Explain Parameters of sockets.

10. Write a code to create a UDP socket.

11. Explain with a situation where to use a STREAM socket.

12. Explain what is a reliable service.

13. Difference between TCP and UDP.

14. Difference between the Reliable and Unreliable service.

Question Bank Unit 3

Q1. Explain TCP packet format in detail with a diagram.

Q2. Describe advantages and disadvantages of client-server model.

Q3. Differentiate between TCP and UDP protocol.

Q4. Explain UDP packet format in detail with a diagram.

Q5. Explain Client- server mechanism with diagram.

Q6. Differentiate between concurrent server and iterative server.

Q7. Describe following functions and write down its syntax

A] socket() function

B] bind() function

C] listen() function

D] send() and receive() function

Q8. Explain the concept of an iterative server with a neat diagram.

Q9. What are the socket system calls used for client-server communication?

Q.10. Describe following functions and write down its syntax

A] accept() function

B] listen() function

C] sendto() function

D] recvfrom() function

Q.11. Explain the concept of concurrent server with neat diagram.

Q12. Describe types of server wrt UDP and TCP protocol.

Q13. Describe connectionless iterative server and connection oriented concurrent server with a neat diagram.

Q.14. List out all parameters of TCP protocol.

Question Bank Unit 4

Q1. Describe DHCP operation in the same network and different network.

Q2. Explain DHCP packet format with a neat diagram.

Q3. Describe inverted tree structure of DNS and explain FQDN, PQDN with example.

Q4. Draw and explain the DHCP client transition diagram.

Q5.Explain different transition states in DHCP protocol.

Q6. Write a short note on :

a] DDNS

b] security of DNS

c] registrar in DNS

Q8. Explain Query and Response DNS messages.

Q9. Describe types of records used in DNS with a neat diagram.

Q10. Write a short note on :

a] Generic Domain

b] Country Domain

c] Inverse Domain

Q11. Describe FTP protocol wrt Data and Control connection.

Q12. Explain different types of TFTP messages

Q13. Describe communication over Control connection and Data connection in FTP protocol.

Q.14 Explain different commands used by the FTP client control process.

Q15. Differentiate between FTP and TFTP protocol.

Question Bank Unit 5

Q1. Explain format of the HTTP request message with example.

Q2. Write short note on:

A] Static Documents

B] Dynamic Documents

C] Active Documents

Q3. Describe HTTP protocol with HTTP transaction diagram.

Q4. Explain persistent and non-persistent connection in HTTP.

Q5. Differentiate between persistent and non-persistent HTTP.

Q6. How does dynamic and active documents works in a web environment?

Q7.Describe any two scenarios used while transferring of email with a neat diagram.

Q8. List and explain SMTP commands used while sending email.

Q9. Explain the mail transfer process in different phases.

Q10.What is MIME ? Explain different MIME headers.

Q11. Write short note on POP and IMAP.

Q12. Write a note on: SMI, MIB and SNMP.

Q13. Describe SNMP message with a neat diagram.

Q14.What is SNMP? Explain PDUs used by SNMP protocol with SNMP PDU format.

Question Bank Unit 6

Q1. Describe streaming of stored audio/video using a web server and using a media server with a neat diagram.

Q2. Describe RTP packet format with neat diagram.

Q3. Explain characteristics of real-time interactive audio/video.

Q4.Describe SIP addresses and SIP simple sessions.

Q5. Describe streaming of stored audio/video using a web server with a metafile and using a media server and RTSP.

Q6. What is RTCP? Explain RTCP message types in detail.

Q7. Explain Real Time Transport protocol(RTP).

Q8. Explain H.323 protocols used in multimedia.

Q9. What is Quality of service(QoS)? Describe different flow characteristics.

Q10. What is Quality of service(QoS)? Which are different techniques used to improve Quality of Service?

Q11. What is H.323 protocol? Explain its operation with a neat diagram.

Q12. Differentiate between RTP and RTCP protocols.