SIDDHARTH GROUP OF INSTITUTIONS :: PUTTUR

Siddharth Nagar, Narayanavanam Road – 517583

QUESTION BANK (DESCRIPTIVE)

Subject with Code : COMPUTER NETWORKS(16CS527)   **Course & Branch**: B.Tech - CSIT

Year & Sem: III-B.Tech & I-Sem   **Regulation:** R16

UNIT-1

1. a. Compare Connection oriented and connectionless service.	6M
b. Explain the functions and protocols and services of each layer?	6M
2. What are the major components of an optical communication system?	12M
3. a) Explain about the Guided transmission Medias in computer networks?	6M
b) Briefly explain about the public switched telephone networks	6M
4. Write about network software & hardware	12M
5. Discuss about a) Computer applications	6M
b) Features of LAN, MAN, WAN	6M
6. With a neat diagram describe in detail about the Network architecture.	12M
7. Explain in detail about a) Data Link Layer and Network Layer	6M
b) Physical Layer	6M
8. Distinguish between point to point links and multi point links. Give relevant diagrams	12M
9. Discuss various types of networks topologies in computer network.	12M
10. Explain the ISO-OSI model of computer network with a neat diagram	12M

UNIT-2

1. Explain the operation of the bit-oriented protocol HDLC with the required frames   12M

2. Explain the various error detection and correction Mechanisms used in computer network   12M

3. Discuss about   a) GO BACK NARQ   6M

                      b) Selective repeat ARQ   6M

4. Explain about the Elementary data link protocols?.   12M

5. a. Discuss stop and wait protocol   7M

   b. Explain about the Carrier Sense Multiple Access Protocols?   5M

6. Briefly discuss about data link layer design issues?   12M

7. Explain about the data Link Layer switching   12M

8. Explain MAC sub layer protocol and frame structure of IEEE 802.11.   12M

9. Describe sliding window protocol using Go back n.   12

10. Compare and distinguish in detail the concept of Virtual-Circuit and Data gram Networks.   12M

UNIT-3

1. a.)State the major difference between distance vector routing and link state routing.   7M
   b) How these routing techniques work   5M

2. Explain about the Routing algorithms.   12M

3. Discuss about a) concept of leaky bucket algorithm?   7M
b) token bucket algorithm with neat diagram   5M

4. Explain in detail congestion control algorithms   12M

5. Explain CSMA/CD protocol   12M

6. Classify the functions of Bridges & Switches in brief.   12M

7. Explain the function of ARP & RARP   12M

8. a. Explain distance vector routing in detail.   7M

   b. Discuss about Inter-network Routing?   5M

9. Write a detail note on Internet protocols   12M

10. a) Explain about the Shortest Path Algorithm? 7M

   b) Explain packet switching in detail. 5M

UNIT-4

1. a) Explain the duties of transport layer. 6M

   b) Write short notes on performance issues of transport layer 6M

2. Show the different approaches in Packet Switching. Explain them in detail.

12M

3. Enumerate the mechanism of three way handshake protocol for TCP

12M

4. Explain in detailed about the Transport Layer. 12M

5. Describe about   a) TCP connection management. 5M

                b) Avoidance of congestion in TCP 7M

6. Explain the function of TCP/IP protocol. 12M

7. a) Explain about elements of transport protocols 7M

   b) Briefly explain the internet transport protocols 5M

8. a) Discuss TCP and its various operations 12M

   b) Write short notes on User Datagram Protocol (UDP). 12M

9. Explain the operation of TCP with neat sketch. 12M

10. Discuss the various timers used by TCP to perform its various operations. 12M

UNIT-5

1. Explain how security is provided in interact operations in detail 12M

2. a) Explain the working of Electronic mail. How SMTP used in Email applications 6M

   b) List and discuss the types of DNS records. 6M

3. Discuss in detail about world wide web 12M

4. a) Explain the encryption and decryption methods. 6M

   b) Discuss Application layer in details 6M

5. Explain in detail about function and structure of e-mail protocol. 12M

6. a) Discuss the File transfer Protocol (FTP)with a neat diagram. 6M

   b) Explain briefly simple network management protocol 6M

7. Write short notes on IMAP and MIME with an example   12M

8. a)Discuss the features of HTTP and also discuss how HTTP works.   6M

   b) Explain about Application layer and its services in detail?   6M

9. Describe the role of a DNS on a computer network with reference to its components.   12M

10. a) Write briefly about World wide web   6M
    b) Describe about High speed LANs   6M