SIDDHARTH GROUP OF INSTITUTIONS :: PUTTUR

Siddharth Nagar, Narayanavanam Road – 517583

QUESTION BANK (DESCRIPTIVE)

Subject with Code : Computer Networks (16MC811)   **Course** : MCA

Year & Sem: II-MCA & I-Sem   **Regulation:** R16

UNIT –I

1	Distinguish between TCP/IP and OSI Model	12M
2	Explain B-ISDN ATM reference Model	12M
3	Explain detail about Network Hardware. How network hardware support the communication of two systems?	12M
4	Describe the Transmission Media. What are the types of Transmission Media?	12M
5	Give brief description about the co-axial cables and also mention their disadvantages.	12M
6	Explain details about ISDN? Describe the types of ISDN?	06M
7	What are the distinct characteristics of local area networks, explain briefly? Why are a LAN required and what objectives are achieved by having a LAN?	12M
8	Discuss various channels supported by ISDN bit pipe.	12M
9	Describe the Transmission Media. What are the types of Transmission Media?	06M
10	What do you mean by computer network? Classify computer networks and Explain them in brief.	12M
11	List out and explain the design issues of data link layer	12M
12	Explain how hamming code is used to detect and correct one bit error with an example.	12M

13	Discuss with a suitable example, the hamming code in detail.	12M
14	What is Elementary data link protocols? Explain the sliding window protocols?	12M
15	Explain the data link layer of HDLC	12M
16	What is the check summed frame transmitted if the message is 1101011011 and the generator polynomial is x4+x+1 using CRC.	12M
17	What is Elementary data link protocols? Explain the sliding window protocols?	12M
18	What is ATM? Describe the design of ATM?	12M
19	Discuss Framing Techniques in brief.	12M
20	What do you mean by sliding window protocol? Distinguish between Go-back-N protocol and selective repeat protocol.	12M
21	Discuss CSMA/CD protocol and its basic functions.	12M
22	What is a token? Discuss the protocol of token ring LAN in general.	06M
	Discuss with example how priority is implemented in a token ring LAN.	06M
23	What is pure ALOHA and slotted ALOHA? Mention the advantages of slotted ALOHA. Discuss with a suitable example, the hamming code in detail.	12M
24	Discuss in detail about the Time Division Multiplexing.	12M
25	Explain the Collision free protocols in details.	12M
26	Describe the working principle of Carrier sense multiple access with collision Detection (CSMA/CD).	12M
27	Compare transparent and source routing bridges.	12M
28	Describe IEEE Standard 802 for LAN's Ethernet?	12M
29	Draw Ethernet frame format and explain each field.	12M
30	Explain detail about the carrier sense multiple access protocols?	12M

UNIT –II

1   Explain the count-to-infinity problem and solution in distance vector routing.   12M

2   Give the general principles of various congestion control algorithms.   12M

3   Write short note on General principles of Congestion control.   12M

4   Explain shortest path routing.   12M

5   Explain discuss how the link state routing uses Dijkstra's algorithm to update the   12M
    Routing tables.

6   Explain distance vector routing algorithm.   12M

7   Explain details about Flooding & Broadcast Routing Algorithms.   12M

8   Define the term choke packet describe the involvement of choke packets in congestion   12M
    control.

9   Explain the prevention polices of congestion?   12M

10 Give the details about Coke packets & Load shedding.   12M

UNIT –III

1   What is Fragmentation? Explain details about types of Fragmentation.   12M

2   What is multicasting? Briefly discuss multicasting techniques and protocols.   12M

3   Describe IP protocol with IPv4 header format.   12M

4   Enumerate the techniques for achieving good quality of service.   12M

5   Discuss the concept of tunneling.   12M

6   What is the significance of Subnetting? Explain Subnetting with an example.   12M

7   Give briefly details about OSPF & BGP?   12M

8   Explain details about Internet control protocols?   12M

9	What is ATM? Describe detail about ATM?	12M
10	Define the term tunneling. Discuss various classes of IP address. Explain various qualities of services in network layer.	12M

UNIT –IV

1	A) What are the functions of transport layer? State transport service primitives.	06M
	B) Discuss TCP transmission policy.	06M
2	A) Discuss various flow control mechanisms in transport layer.	06M
	B) Briefly discuss about UDP.	06M
3	A) Write a detailed note on transport service primitives.	06M
	B) Give brief description about the flow control and buffering.	06M
4	Explain in detail three way handshaking for connection establishment in TCP.	12M
5	How does UDP differ from TCP? List the applications of UDP.	12M
6	Write short notes on Transport layer? How Transport layer supports the connections establish, releasing connection, flow control, buffering & crash recovery?	12M
7	What are the functions of transport layer? State transport service primitives.	12M
8	Write the structure of TCP pseudo header and explain how it is used in checksum calculation.	12M
9	Discuss adaptive retransmission in the transport layer.	12M
10	Define UDP and discuss the different fields of the format of a used datagram. List out the uses of UDP protocol.	12M

UNIT –V

1	A) Explain the message authentication operation used in RSA technique.	06M
	B) What is meant by firewall? Explain the types of firewall.	06M

2	A) Discuss in detail about the filter based fire walls.	06M
	B) Explain the DES algorithm with suitable example.	06M
3	A) Explain how a firewall prevents unauthorized access.	06M
	B) With neat sketch explain DES.	06M
4	A) Describe various characteristics of networks security.	06M
	B) Briefly discuss about RSA algorithm.	06M
5	What is the purpose of a firewall? Explain the differences between filter based and proxy based firewalls.	12M
6	What is digital signature? Explain digital signature using message digests.	12M
7	What is a firewall? Explain the different types of firewalls.	12M
8	Explain details about the Authentication protocol?	12M
9	How to prevent the access the website? Where support the Firewalls?	12M
10	Describe details about Cryptographic algorithms?	12M
11	What is electronic mail? Explain the two scenarios of architecture of e-mail.	12M
12	A) Client side web documents.	06M
	B) MIME.	06M
13	Explain details about HTTP, SNMP	12M
14	Explain in details about Network management system.	12M
15	Describe importance of DNS in Application Layer.	12M
16	What is World Wide Web? Explain details about HTTP?	12M
17	Describe details about Traditional applications?	12M
18	Describe details about the SMTP.	12M

19 Give brief description about the DNS.   12M

20 What is a name server? List and explain the features of various name servers.   12M

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