SIDDHARTH GROUP OF INSTITUTIONS :: PUTTUR
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QUESTION BANK (DESCRIPTIVE)

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

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

UNIT-1

1. a. Compare Connection oriented and connectionless service.	[L2][CO1]6M
b. Explain the design issues of layers?	[L2][CO1]6M
2. Explain in detail about Fiber optic cable?	[L2][CO1]6M
3. a) Explain about Twisted pair cable?	[L2][C01]6M
b) Briefly explain about Coaxial cable	[L1][CO1] 6M
4. Write about various Network topologies?	[L1][CO1]12M
5. Write about OSI network model?	[L1][CO1]12M
6.Compare OSI and TCP/IP Network models .	[L2][CO1] 12M
7. Explain in detail about TCP /IP Network model?	[L2][CO1]12M
8. a) Explain about the various network types?	[L2][CO1] 6M
b) Write about the architecture of Internet?	[L1][CO1]6M
9. Give the description of wireless transmission media	[L1][CO1]12M
10. Explain about Public Switched Telephone Network	[L2][CO1] 12M

UNIT-2

1. Discuss bit-oriented HDLC Protocol with the elaborative explanation of its frames [L1][CO2]12M

2. Explain Cyclic Redundancy check method used for error detection [L2][CO2]12M

3. Discuss about a) GO BACK N Protocol [L1][CO2]6M

   b) Selective repeat Protocol [L1][CO2]6M

4. Explain about the Elementary data link protocols?. [L2][CO2]12M

5..Discuss stop and wait protocol for noisy and noiseless channels [L1][CO2]12M

6.What is framing? Write about bit oriented framing method? [L1][CO2]12M

7. Write about the services provided by the Data link layer? [L1][CO2]12M

8.Write about Point to Point (PPP) protocol in detail? [L1][CO2]12M

9. Write about Pure ALOHA and slotted ALOHA protocols? [L1][CO2]12M

10. Write about CSMA/CD protocol. [L1][CO2]12M

11. Explain in detail about Controlled access protocols which are used in MAC sublayer [L2][CO2]12M

12. Write about the following Channelization protocols used in MAC sublayer

   a)F DMA [L1][CO2]6M

   b)TDMA [L1][CO2]6M

13. Write about Checksum error detection method with neat diagram. Also explain Internet checksum method [L1][CO1]12M

UNIT-3

1. a)Explain distance vector routing algorithm [L2][CO3]10M
   b) briefly state what is count to infinity problem [L1][CO2] 2M

2. Explain about Static Routing algorithms. [L2][CO3]12M

3. Discuss about a) leaky bucket algorithm? [L1][CO3]6M
   b) token bucket algorithm with neat diagram [L2][CO2]6M

4. Explain in detail about congestion control algorthims [L2][CO3] 12M

5. Write about the following Quality of Service techniques

a) Traffic shaping technique [L1][CO2] 3M

b) Packet Scheduling algorithms [L1][CO2]7M

6. Write about Link State Routing algorithm [L1][CO2]12M

7. Explain IP V4 protocol in detail [L2][CO3]12M

8. a)Write about BGP – Exterior Gateway routing protocol? [L1][CO3]6M
b) Write about Internet control protocols? [L1][CO3] 6M

9. Explain IP v6 protocil in detail [L2][CO3]12M

10. a) Explain about the Shortest Path Algorithm? [L2][CO3]6M

b) Explain Flooding? [L2][CO3] 4M

11. Explain Virtual circuit network and Datagram network with diagrams [L2][CO3]12M

12. Write about the design issues of Network layer [L1][CO3]12M

13 Write in detail about packet fragmentation done in Internetwork Routing? [L1][CO3]12M

UNIT-4

1. Explain about the elements of transport layer. [L2][CO4]12M

2.what are the different Primitives used for transport service? Explain them. [L1][CO3]12M

3. Explain in detail about each field of TCP segment header? [L2][CO4]12M

4.Explain the three way handshake protocols with suitable diagram [L2][CO4]12M

5. Describe about a) TCP connection Establishment. [L1][CO3]7M
b) TCP Connection Release [L1][CO2] 5M

6.Explain in detail about congestion control in TCP [L2][CO4]12M

7. Explain the TCP protocol with neat sketch. [L2][CO4]12M

8. Discuss the various timers used by TCP to perform its various operations. [L1][CO3]12M

9 Write in detail about performance issues of transport layer [L1][CO4]12M

10 Write in detail about User Datagram Protocol (UDP). [L1][CO4]12M

UNIT-5

1Write in detail about DNS Name Space and Domain Resource records	[L1][CO3] 12M
2 Explain in detail about function and structure of e-mail protocol	[L2][CO2]12M
3.Explain briefly about SMTP protocol	[L2][CO4]12M
4 Discuss in detail about world wide web	[L2][CO4] 12M
5 Write about cookies	[L1][CO5]12M
6 Write about static web pages	[L1][CO5]12M
7 Explain about dynamic web pages	[L2][CO5] 12M
8 Discuss the features of HTTP and explain how HTTP works	[L1][CO4]12M
9 Write about TELNET	[L1][CO5]12M
10 Discuss about File Transfer Protocol with neat diagram	[L1][C05]12M