Lpu guide

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Q2. (a) A client-server architecture comprises of various course of actions that tell the services of a protocol stack to perform a specific set of actions on a peer entity. Considering a telephone user who calls the company manager online, explain all the actions performed in a proper order. [15 Marks]

OR

(b) Delineate the key design issues considered in computer networks to implement any layered architecture as a protocol stack. [15 Marks]

Q3. (a) Protocols in which stations listen for a carrier and act accordingly have proven to show quite less collisions. Explain the Carrier sensing technique used for the wired networks. [15 Marks]

OR

(b) Explain the working of Selective-Repeat Request for the Noisy channels with diagram. How the concept of piggybacking acts as an add-on? [15 Marks]

Q4. (a) How the packet of size 4376 bytes be fragmented if the Data Link Layer protocol can accommodate only 1500 bytes as its PDU? What parameters of IP header are affected? Explain same with diagram using concept of Fragmentation. [15 Marks]

OR

(b) A router with IPv4 address 125.45.23.12 and Ethernet physical address 23:45:AB:4F:67:CD has received a packet for a host destination with IP address 125.11.78.10. Show the entries in the ARP REQUEST and RESPONSE packet sent by the router. [15 Marks]

Q5. (a) If you are a network administrator of an Income Tax Department, what strategy you will apply to avoid congestion in the network. [15 Marks]

OR

(b) Link state routing has a different philosophy from that of distance vector routing .Justify your answer elaborately taking points of difference between them. [15 Marks]

Q6. (a) Explain in detail the services offered by TCP to the processes at application layer. Also, describe the phases involved in connection-oriented transmission by taking a suitable example. [15 Marks]

OR

(b) Define the concept of Name space and the number of ways in which it is organized. Also, explain the concept of Domain name space and its distribution with respect to zones in detail. [15 Marks]
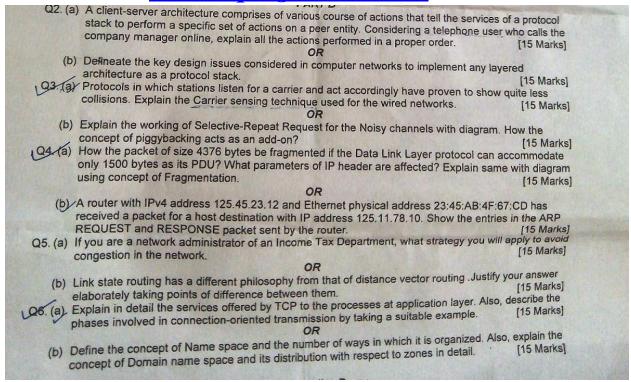
Q1

a) Differentiate between LAN, WAN, MAN in terms of the range and place where they are used.

b) When we are using mesh topology, how many wires and ports per system are required if there are 5 stations in a network?

c) What is the significance of twisting in twisted pair? Explain with example.

d) The signal sent at the source machine does not remain same when received at the receiver. What imperfections lead to signal degradation?

e) A customer asks for a block of 64 addresses from ISP. If the ISP assigns the addresses in classless addressing scheme, what range of addresses can be provided to the customer in the block classless addressing scheme, what range of address can be provided to the customer in the block 185.10.X.X/16?

f) Mention ant two network layer design issues before implementing it for internetworking.

g) Differentiate between intra- and inter-domain routing in network layer.

h) Discuss two-node loop Instability in distance vector routing protocol.

i) What is traffic shaping? Name two methods to shape traffic.

j) Write a note on CEASER CIPHER.

PART B

Q2.

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OR

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OR

b) Explain the working of Selective-Repeat Request for the Noisy channels with diagram. How the concept of piggybacking acts as an add-on?

Q4

a) How the packet of size 4376 bytes be fragmented if the Data Link Layer protocol can accommodate only 1500 bytes as its PDU? What parameters of IP header are affected? Explain same with diagram using concept of Fragmentation.

OR

b) A router with IPV4 address 125.45.23.12 and Ethernet physical address 23:45:AB:4F:67:CD has received a packet for a host destination with IP address 125.11.78.10. Show the entries in the ARP REQUEST and RESPONSE packet sent by the router.

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