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Subject Data communication

Question:- 1.

In the OSI model, each layer uses the services of the layer below. The primary function of the data link layer is to provide as well defined.

Type of Services:-

1) Unacknowledged Connectionless

The data link layer of sending machine sends indepe form of data. The receving machine does not acknowled receving the frame No' logical connection.

Acknowledged connectionless:
No logical connection i
t of between host machir
ut each frame sent by
he source machine is ack-

Acknowledged connection-ori

This is the host service that the data link layer can offer. In this data, data is transmitted along logic Path.

Protocols

Noisy channels:-

Although the stop and wait Protcle give us a idea to use add flow of Control to it predessor. Noisless channels are non existent.

no doubles for each data unit which transmitted ilgl of all data so the solution is that provides better utilization of band width is piggy backing.

Question 5

In multi stage switching blocking refers to times. when one input cannot be connected to an output because their is no pat aveiable. One Solution is to blocking is to increas the number intermediate switches base on other criteria.

Question 1.

There techniques of

Question 8:-

=> In data communication, our
is to send data elem

Signal Rate:-
The signal rate is the number signal element sent in is the unity or simple band.

Question 11
The IPv4 adresses we are all used to seeing are

Noiseless channels: An ideal channel in which no frames are lost duplicated or corrupted is regard as noiseless channe

Simplest Protocal:- In simplest protocal, the is no flow of control and error. It is a unidirectional Protoc in which data fram transf in only one direction.

Question 4

connunication are mostly full duplex in nature i.e data transmission in bth direction. A method to achive ful duplex commuct is conside the both. Each link complises a forwar channel for sending dat and and receving.

However in the abo arrangement traffic load

on the structure of a subnetted IP address.. classless adresses using a two part view of IP address and classful addressing, has a three part view with classful addressing, the address dw has 8, 16, or 24 bits net ter H base on class A, B and C.

Question 1b

An address is slash notation (CIDR) contains all information we need

=> The last byte is 01000001

=> Changing the last 5 bits to 00100, we get 01000000 or 64.

Section 16:-

NAT:

NAT stand for network address translation. It is a way to map multiple local private addresses to public one before tranfering the information organization

How can NAT Help:-

Theoretically, there are 232 IPV4 address. a little over more than 4 billion IPV4 addresses. The number of IPV4 available addresses is actually less than the theoretical number. NAT was designed as a temporary solution to circument this problem and support IPV4 addresses.

Question 19

127

2	127	
2	63	- 1
2	31	- 1
2	15	- 1
2	7	- 1
2	3	- 1
2	1	- 1
	0	(remainder)

127.4.6.8.

14

2	14	
2	7	-
2	3	-
2	1	-

or remin

14 indicimal ooo

127 (indeimal = 10000000 1

6

2	6	
2	3	6
2	1	1

8

8	
4	0
2	0
1	0

208

2	208	-0
2	104	-0
2	52	-0
2	26	-0
2	13	-0
2	6	-1
2	3	-0
2	1	-1

(208 decimal) = 11010000 binary.

34

2	34	-0
2	17	-1
2	8	-0
2	4	-0
2	2	-0
2	1	-0

34 decimal = 00100

b = 10101111 11000000 11111
00011101

Ans 175.192.248.29.