Department of computer science and Engineering

Mid Semester Exam

spring - 2020

Name: Sabuj Kumar Tarafdar

Semester: 4th year 1st Semester

ID : 1701139

Roll: 139

Course Code : CSE - ~~403~~ ~~303~~ 315 (self study)

Course Title: ~~Data~~ communication

Date: 25-08-2020.

17101139 ①

Ans: to the q. no. 2

ⓐ

$x = 9+1 = 10$

$y = 3+1 = 4$

Mesh topology links $= \frac{x(x-1)}{2} = \frac{10 \times 9}{2} = \frac{45}{~~90~~}$

For ~~the~~ Star topology link = 4, because of the 'Hub' line to line connected by the

12

For the security issue Mesh topology is better the star topology. Because of this topology each of the ~~one~~ computer connected by the others computers that's why is easy to reach another computer and do not need to use line ~~or to~~ for ~~and~~ any ~~one~~ contures ~~and~~ of the one ~~any of the~~ computer that connected by this topology.

1710 1139

b) Half-duplex

advantage: this data flow is possible to both side transmit data.

dis advantage: Both is not possible send data at same time transmit.

4

Full duplex:

advantage; Transmit and rieive simultaneously.

dis advantage; NO proper bandwith utilization as the same line is used for sending and receiving data at the same time.

17101139

Ans. to the q. no. 2

a)

$x = (9 \times 9) \% 6 = 3$

$y = (3+1) \% 6 = 4$

Pairs	Logical IP	Physical address
A	3	4
B		
C		
D		
E		
F		

17101139

Points	logical addr	physical address
A	3	9
B00	3+B00	9+B00
B01	3+B01	9+B01
B51	3+B51	9+B51
B50	3+B50	9+B51
B51	3+B51	9+B51
B42	3+B42	9+B42
B40	4+B40	4+B40
B41	4+B41	4+B41
B31	4+B31	4+B31
B32	4+B32	4+B32
B30	4+B30	4+B30
B21	4+B21	4
B22	4+B22	4+B21
B20	4+B20	4+B22
B10	4+B10	4+B10
B11	4+B11	4+B11
B12	4+B12	4+B12
B	4+B	4B
C	4+C	4C
D	4+D	4D
E	4+E	4E
F	4+F	4F

1710439

5

	Sende na	Receiver real	Sender IP	Reciver IP	Port no sende	port no. Receiver	Data	tcp/ip
PC5	4+~~[illegible]~~	4+~~[illegible]~~ 4=F	3+[illegible]40	4+52	600	7000	4	4
[illegible]40	4+[illegible]4	4+[illegible]52	3+040	4+52	600	700	4	4
[illegible]50	4+[illegible]52	4+50	3+[illegible]42	4[illegible]50	6000	7000	4	4
F5	4[illegible]50	+4+50	3+[illegible]450	4+[illegible]50	600	700	4	4

[710113] (6)

b) Data link layer → ~~work load~~

~~the to~~ Error control and

Flow control.

If any can connected
by any place the Data
link layer to resend it
many time to reach the
receiver.

4 Flow control many size
of the file can receive
the receiver is control
by the Data link layer.
If any data size lower or
upper the receive size the
it ~~ee~~ fined the flow by
the data link layer.

17101139

(2)

Ans. to the Q.no 2

a)

$x = 9 + 1 = 10 \Rightarrow B$

$y = 3 + 1 = 4 = SNR$

$C = x \log_2(1+y) = 10 \log_2(1+4)$

$= 23.21$ kbps

16 kbps $= 2\alpha \times 10 \times \log_2(L)$

$\Rightarrow \log_2 L = \frac{16}{20}$

$\Rightarrow \log_2 L = \frac{8}{5} = 1.6$

$\Rightarrow L = 2^{1.6} = 3.031$

16 = Bit rate

and $L \geq 3.003$ Ans

2