= 28 - 0.3

= 27.7

Disc-CW

$\Sigma D - V_2 + V_{Ds1}' - V_1 = V_0$ → 0

V_{bw}

$\Rightarrow V_{Ds1}' = .20 + 4 + 4$

= 28

MID 01

Ans sir

405

Ans to the question no 01

A = 01000011 Flag = 01111110

B = 11100011 Esc = 10001111

A	Esc	Esc	B	Flag	B

Flag	A	Esc

01111110 01000011 10001111 10001111 11100011 01111110 11100011 01111110

Flag A Esc Esc B Flag B Flag

Now,

01111110 01000011 10001111 10000111 10001111 10001101 11110101 11100011 01111110

Flag Bit stud Bit stuffed Bit stuffed Flag

Reciver

01000011 10001111 10000111 10001111 10001101 11110101 11100011

Real data:

Mim Bin Hossain

ID: 2021-1-60-071

analyse how receiver would determine consecutive 0s 1s

		1st	2nd	3rd	4th	5th	6th	
A	A (101101)	1	0	1	1	0	x	
B	B (101110)	1	0	1	1	1	0	winner
C	C (101010)	1	0	1	0	x	x	
D	D (100010)	1	0	0	x	x	x	lowest number starvation
	4 (101100)	1	0	1	1	0	x	
	Resulting of Bit(OR)	1	0	1	1	1	0	

min Bit hopping

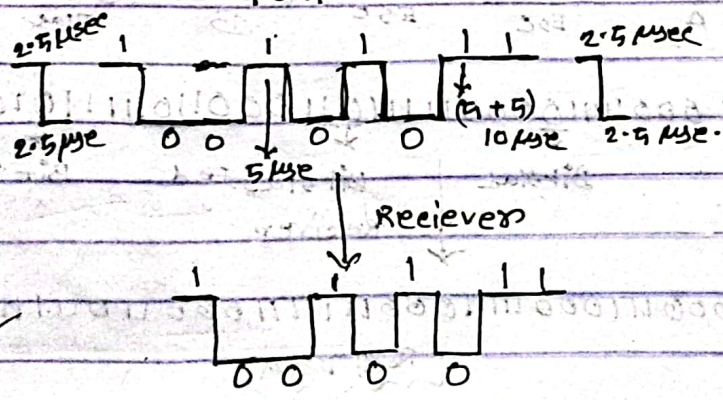
∴ winner = B (101110) we can see that the highest number wins. so the lowest number no matter.

procedure for a countdown mechanism :—

i) Decide on the lenth of time for the countdown
ii) set the starting time
iii) start the countdown.
iv) update the disply
v) check for completion
vi) perform actions at completion
vii) stop the countdown.

(i) Decide on the every Bit same lenth for the countdow
(ii) Intenting Data transimitted
(iii) start the countdow
(iv) updat the dispaly
(v) ~~check for completion~~
(vi) check for completion
~~0~~ 0 is the out the chant

100101011



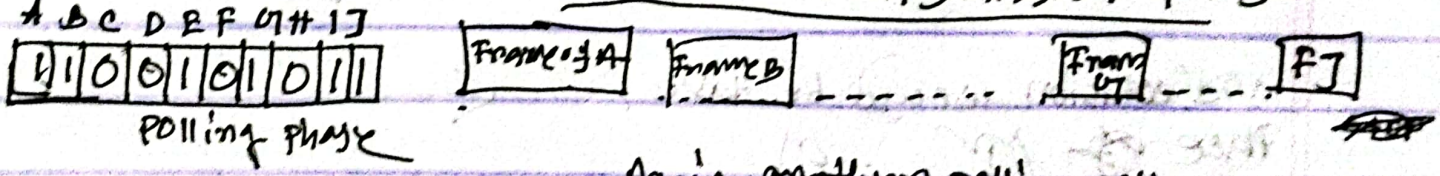
In (iv) framing method Bit ~~time~~ timing is used of frame the data The data is intentionally ~~violation~~ violated to the let the reciever know the starting and ending. such as per Bit 5 μse. high signal is 1, and low signel is 0. so, there for would be 2.5 μse high signel and low signel at the starting and ending of the data. so, we can see that ~~0~~ a, 0s and of 1s

21

we know that in bit map protocol. There is a polling phase every transmission phase. Every nodes has a specific contention slot. If there are 10 host/nodes and we know the per contention slot is T, so, then the total time for ~~polling~~ polling phase is $10 \times T = 10T$.

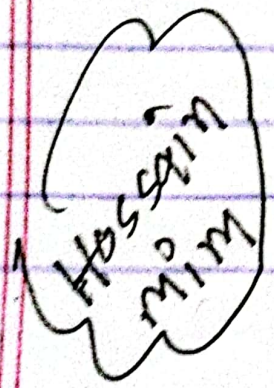
Every has a map the given bit-map "1100101011" and Everyon know its place in the LAN. G knows that its place is 7, 0 in .: G knows there are 3 nodes before and 6 node after the slot of G that will data transmitt do

Transmission phase.



..... Again another polling pash

26



polling phase is $\frac{T}{9 \times 26}$ → Node

$= 234$ byte

So, the

per node = $\frac{9}{26}$

$= 0.346$ byte

The contention period for the noted A and D is 2 times the propagation distance of τ_{A-D}. It will take τ_{A-D} time for the data to be transmitted from A to D. In the worst case scenario D will transmit the data just before τ_{A-D} time, and the collision would take place so, same the worset worst case scenario of E is will transmit the data just befor τ_{A-E}

so, $(\tau_{A-D} - \varepsilon)$

∴ The contention period $\Rightarrow (\tau_{A-D} - \varepsilon) + (\tau_{A-D} - \varepsilon)$

$\Rightarrow 2\tau_{A-D}$

and collision would be take place $(\tau_{A-E} - \varepsilon)$

Contion period = $2\tau_{A-E}$

$\Rightarrow$

Hossain mim

2^2-1 0,1,2 2^1-1 3^2 3^2-1 2^2
$\Rightarrow 4-1$ 3^2 $9-1$ $\Rightarrow 2-1$ $=9$ $=9-8$
3

A and B get into consecutive collision using (BEB)

set: A {0, 1, 2, 3} B = {0, 1, 2, 3, 4, 5, 6}

Here

we know BEB Algorithm

i) set {0, ... 2^n-1} n = collision of number

ii) pick element randomly × 512 = waiting time

set A collision is 2 and B collision is not 3 of the number becam 2^n-1 not possible

A to communication with B whatever the element A picked ranmodly from is own set,

collison 2 For A

$0 \times 512 = 0$
$1 \times 512 = 512$
$2 \times 512 = 1024$
$3 \times 512 = 1536$

But not set collision 1

$0 \times 512 = 0$
$1 \times 512 = 512$
$2 \times 512 = 1024$
$3 \times 512 = 1536$
$4 \times 512 = 2048$
$5 \times 512 = 2560$
$6 \times 512 = 3072$

(i) Here, (A: 0, B: 1) No collision
But (1, 1) 2nd collision

(ii) From the given set A the device "A" randomly pick a number from the set = {0, 1, 2, 3} and from the given set B the the device "B" will also pick a number randomly {0, 1, 2, 3, 4, 5, 6}
Now, they will collision consecutiv

so, If the Both devices picks same number each time become the both waiting time same so the collision bit time and fall in a collision in their transmition period.

so, we say that the BEB algorith will 1st collision time 50% successful chance Data transmitted 2nd collision time 50% such

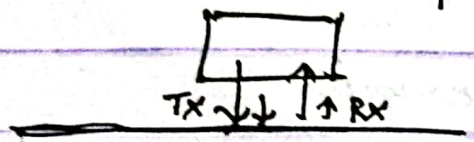
so we say A, B pick elements with Equal jet into it collision

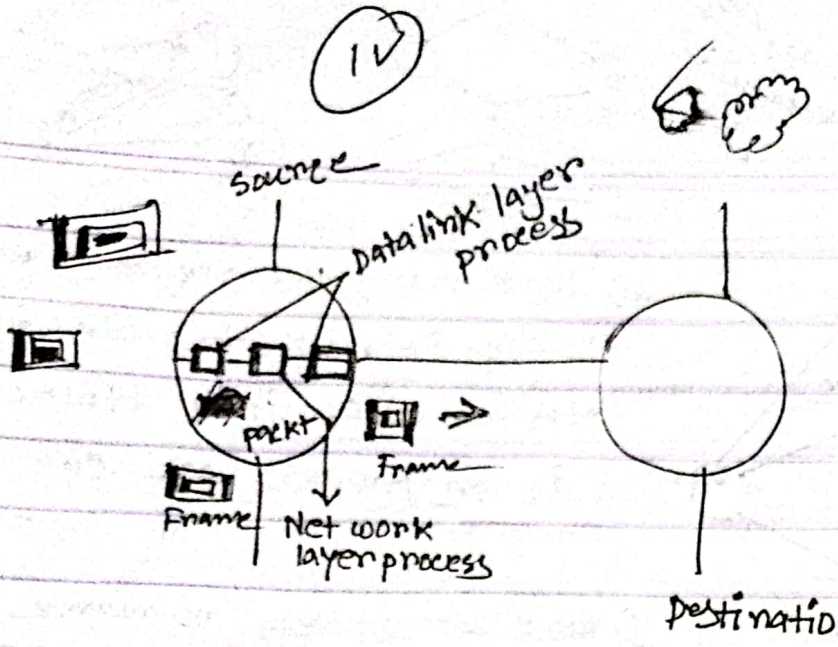
50% data successfull Transtime

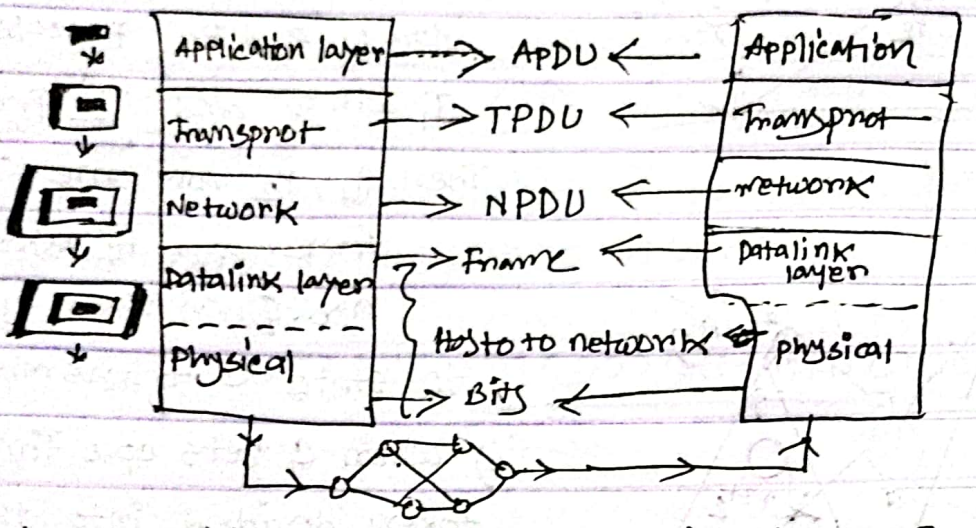
50%, data not

CSMA/CD As in Half Duplex because only one direction is possible at a time, when data transmitted (TX) receving part (RX) detect collision. There is no collision Host can transmit data But collision is detected host can not transmit data. That's why is Half Duplex.

100%



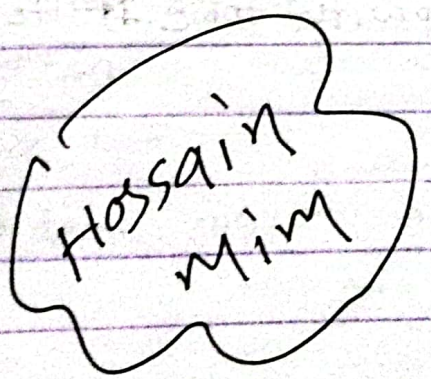




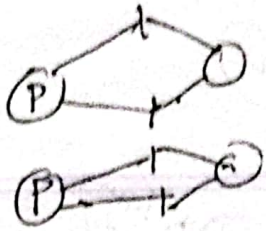
~~Router uses the path, Router is the Datalink layer I~~

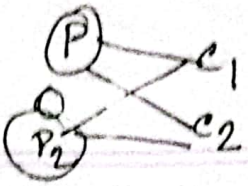
Router as a device of the network layer because it operates at the network layer of the TCP/IP Ref. model. The (NL) is responsible for logical addressing, routing and forwarding of data packets across different network.

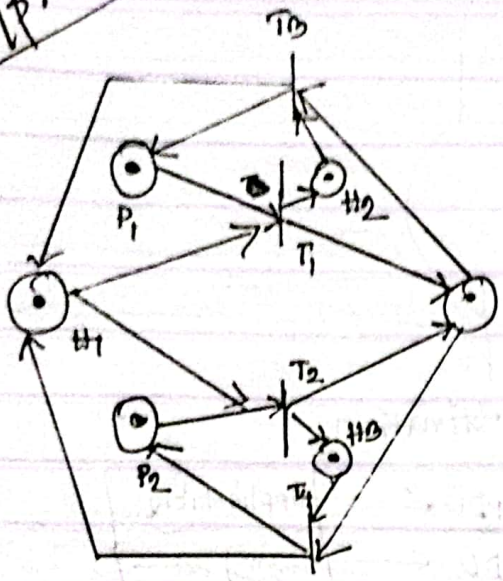
Router make intelligent ~~di~~ decision about the best path for ~~forda~~ forwarding data packets based on the destination.



100%
very Improtant







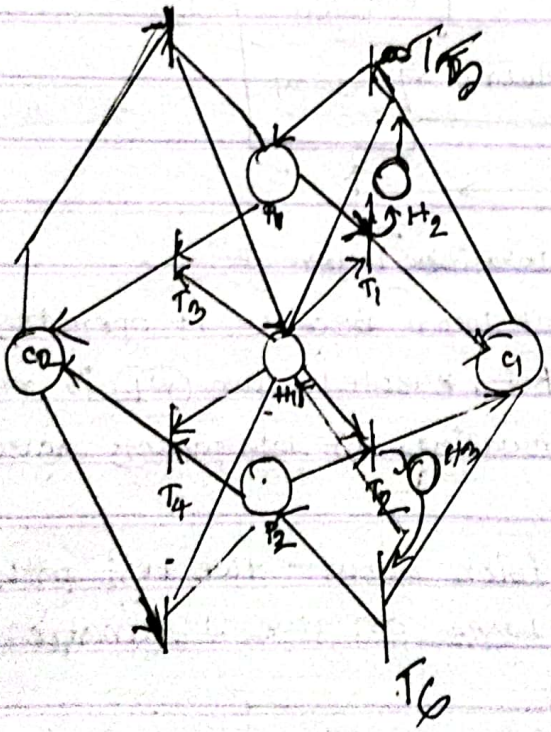
i) Here many the problems exists fllowing Petri.net model for mutual exclusion between P1, P2 Process and C1

I) Here 1st problem no name Transmi for P1 and P2. Process. Transmit T1 will P1 and T2 Proce P2.

Then, P1, P2 any one The token is fire and H1 asked to fire also. Then then the token will to state C transmission.

II) when C gets cpu time it fire token devided into the P1, P2 1st the returnt the token go to t3 and asked H2 help with token It will execute and will go to stat P1 and H1 Through T3.

III) one the other side devided token go to t4 and ased to H3 Help with toke. It token.

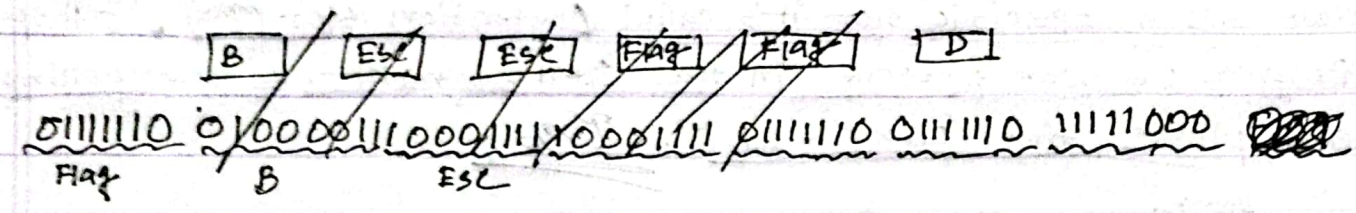


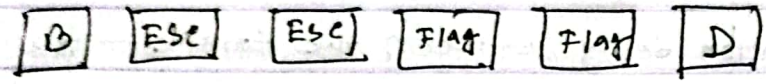
1st

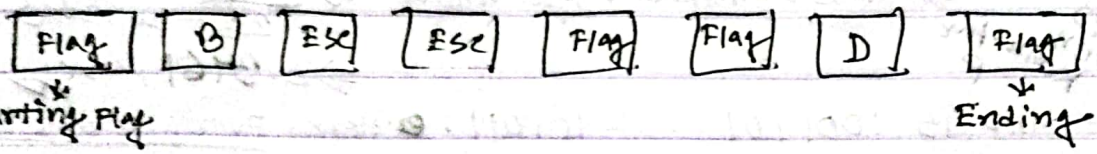
Ans to the question no: 1

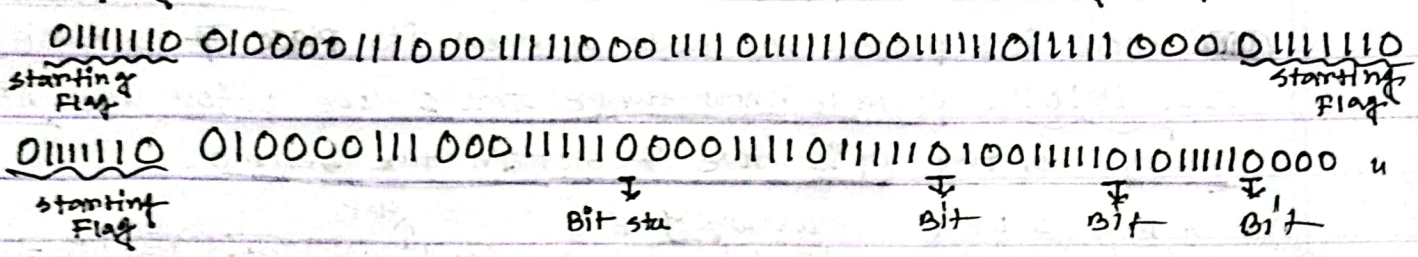
B = 01000011 Flag = 01111110

D = 11111000 Esc = 10001111





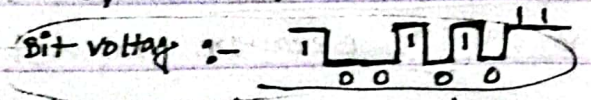


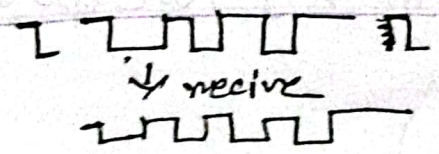


Ans to the question no: 2

In the (Five) frame method is used to Bit time of the frame the data. The data is intentionally voilated to let the recievers know ~~that~~ the at starting and ending of the frame. If the data Bit 1,0 so, there for 1 is the high voltage or signal and 0 Bit is the lowest voltage such as per Bit time is 5 μsec. There for would be 2.5 μsec high and voltage at the starting and ending of the frame the data. so, we can say that a clear violation that will not possible by the data.

The given sequence is, 10010111





For the receiver would be consecutively 0's is (5+2) = 10 μsec at the lowest voltage in the frame.

transmission phase polling phase

Here we see that the Bit map protocol. There is a polling pash and every nodes transmit frame its transmission phase. Every Node has a specific slot it's called Contention slot (τ). If there are 26 node present in the LAN segment. so the polling phase time $(26 \times \tau) = 26\tau$. Ans

Here,

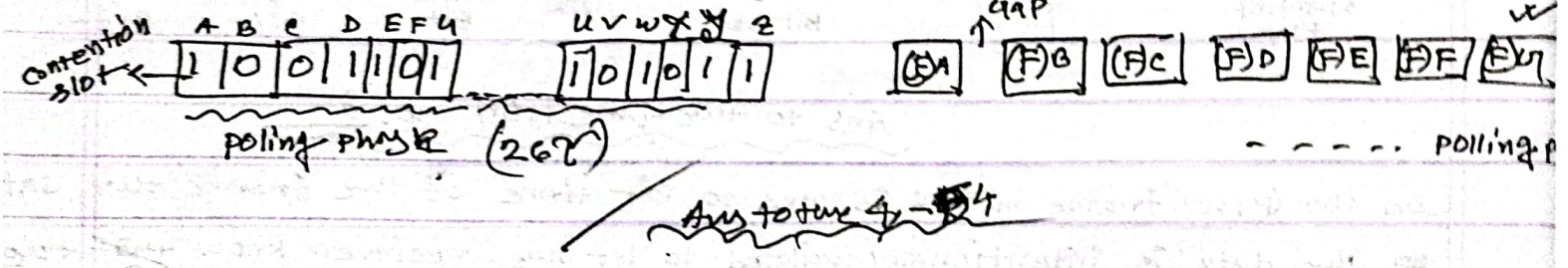
propagation delay between the farthest tow node is 9 μsec

so the Minimum duration is $\frac{9}{26}$ → nodes.

$\Rightarrow 0.3461$ μsec

Every node has been know the P

The Bit MAP is 1001101 ..... 101011. Here, Every Nodes has been know it's place. so, Node G know its place 7 Because 1001101 ..... 101011. G Node know there are 6 node befor and After 18 Nodes. So, the G is the 7 slot in the senario.



Any to the 4 - 64

B, C, D, G and H are interested

	1st	2nd	3rd	4th	5th	6th
B(011110)	0	1	1	1	1	0
C(011010)	0	1	1	0	X	X
D(010010)	0	1	0	X	X	X
G(011100)	0	1	1	1	X	X
H(011011)	0	1	1	0	X	X
(OR)	0	1	1	1	1	0

highest / lowest / star

In the winner is B(011110) Because Highest number of the node B. lower number is D(010010)

In the Station has the possibility = starvation.

Starvation

Name of the Experiment

Date
Exp. No.
Page No.

The contention period node A to E is two times propagation delay is τ_{A-E}. It will take τ_{A-E} times for the data to be transmit A to E. In the worst case senario node E is the data transmit will just befor τ_{A-E} time. and collision would be take place is,

$$\{(\tau_{A-E} - \epsilon) + (\tau_{A-E} - \epsilon)\}$$

$$\Rightarrow 2\tau_{A-E} \quad [\epsilon = 0]$$

And the contention period node A to C is two times propagation ~~dely~~ delay is τ_{A-C}. It will takes τ_{A-C} for the data to be transmit A to C. In the worst case senario node C ~~is the data~~ will be data tromsmitssion just befor τ_{A-C} time and collision would be take place is

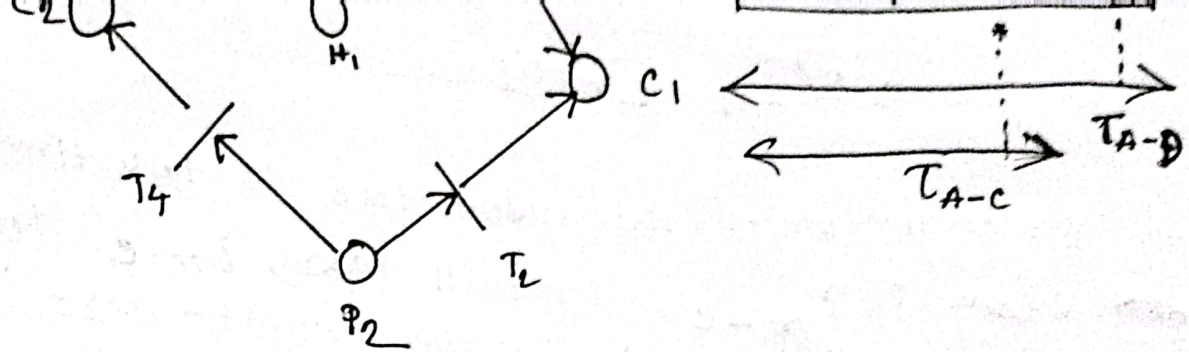
$$\{(\tau_{A-C} - \epsilon) + (\tau_{A-C} - \epsilon)\}$$

$$\Rightarrow 2\tau_{A-E}$$

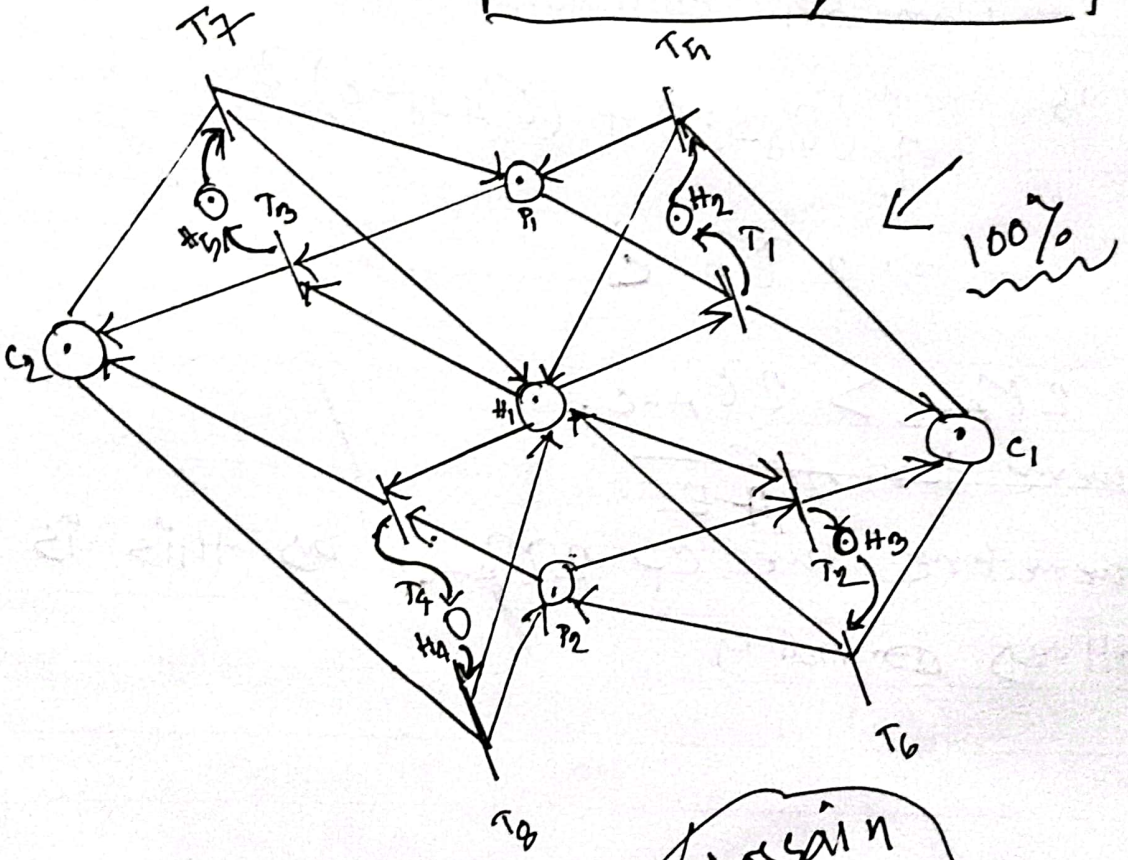
So, $2\tau_{A-E} > 2\tau_{A-C}$.

~~So, there for $2\tau_{A-E}$~~

So, therefore the CP $2\tau_{A-E}$ as this is the farthest node



Ans to the Q no: 6



100%

Hossain Mim