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Ans: to the qu: NO: 2

B, C, D, G, H are interested.

	0	1	2	3	4	5	
B (101110)	1	0	1	1	1	0	
C (101010)	1	0	1	0	×	×	
D (100010)	1	0	0	×	×	×	
G (101100)	1	0	1	1	0	×	
H (011011)	0	×	×	×	×	×	
or,	1	0	1	1	1	0	→ B

so, the winner will be "B"

Ans: to the qu: NO: 3

for A :

set A = {0, 1, 2, 3}

→ 0 × 512 bit time = 0 bit waiting time

→ 1 × 512 bit time = 512 bit waiting time

→ 2 × 512 bit time = 1024 bit waiting time

→ 3 × 512 bit time = 1536 bit waiting time

Here, B is similar as A.

and, C = {0, 1, 2, 3, 4, 5, 6}

first 3 bit is similar, but for 4, 5, 6

we will get 2048, 2560, 3072 bit

waiting time.

If we compare between A and C, if we choose any random number from A and C they will wait before transmitting,

Here,

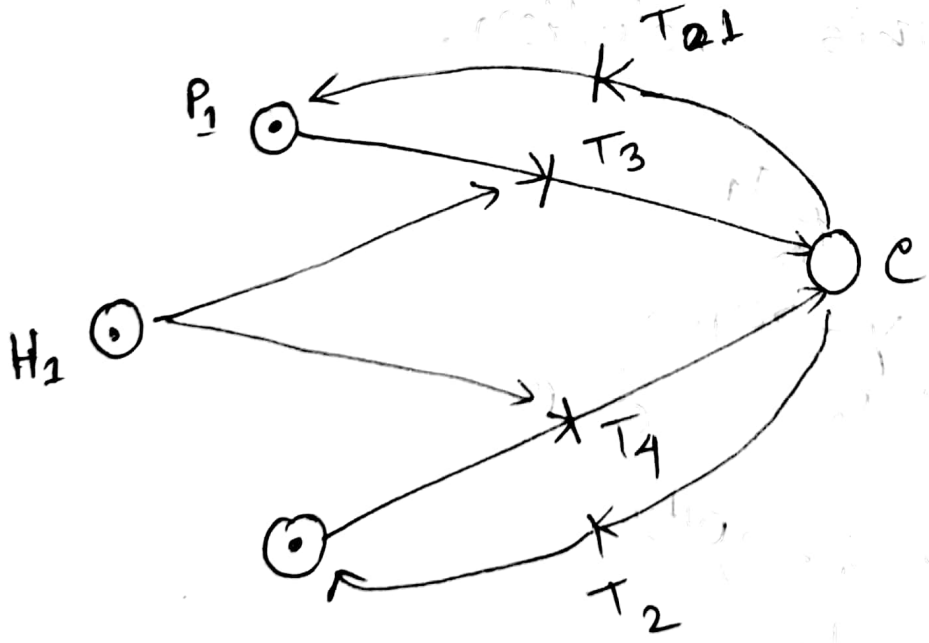
$\{0, 1, 2, 3\}$ is common to all set (A, B, C). so, they will wait 102< bit time to transmit and they will occur a collision for same time.

C can't communicat with other nodes beeause if A tries to communicate with C for picked number it can occure collision in sending. same goes for b and C.

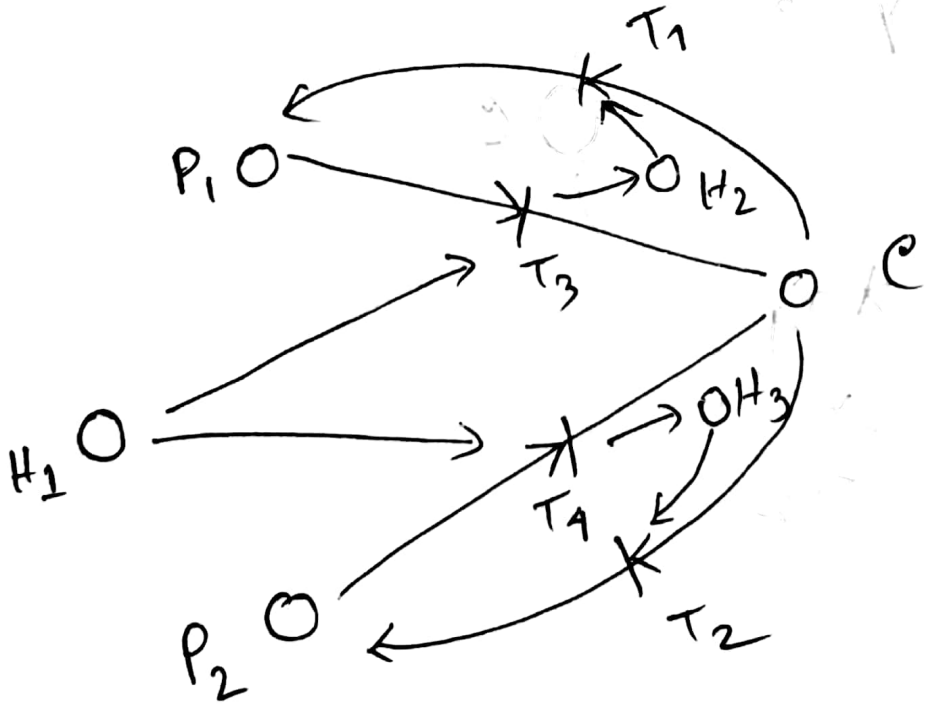
Ans: to the qu: NO: 5

There is a problem of returning the token and mutual exclusion.

Here, P_1 and H_1 sends token to C_1 but it can't complete process for because of return function.



In the diagram if P_1 and H_1 send two token it will go to the C through t_3 and while returning, it will return two token to P1 which is irrelevent. and same for P2, so, we should use two more (h_2, h_3) to solve this solution.

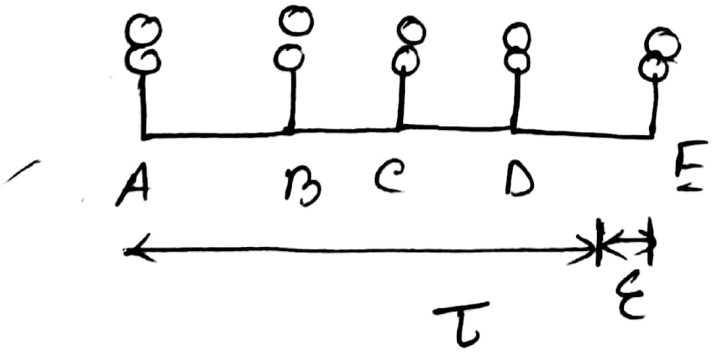


Ans: to the qu: NO: 4

CSMA/CD is inherently half duplex because it can not send and recieve data at the same time. It can send data when it is not recieving and it will wait to transmit.

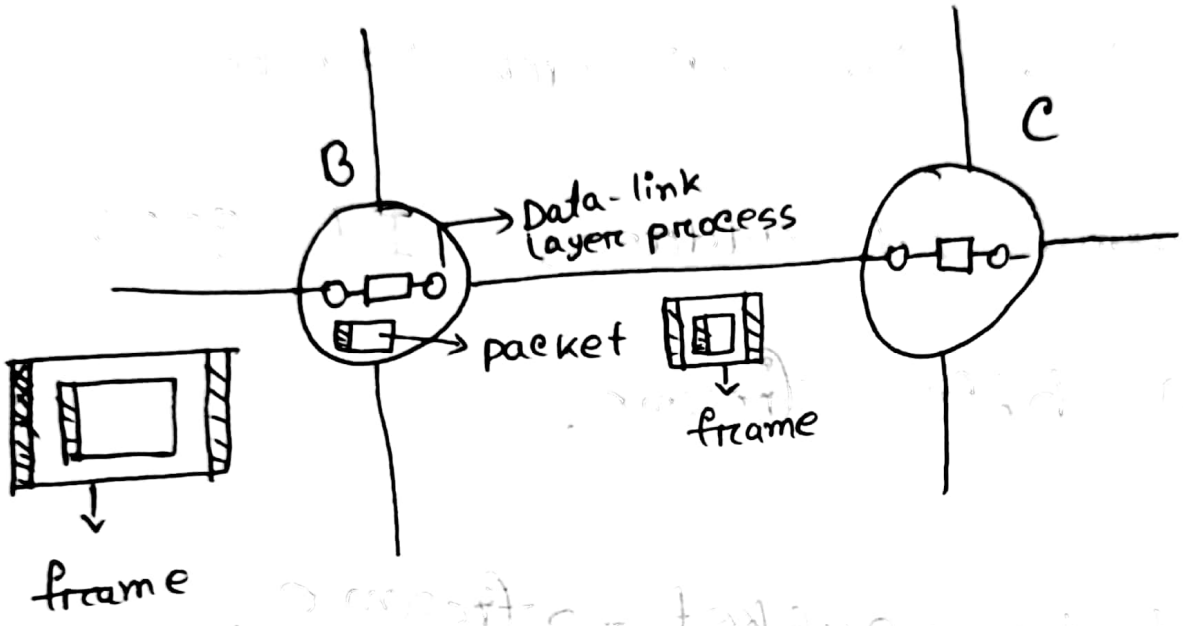
If may occur collision if they do send and receive at a same time.

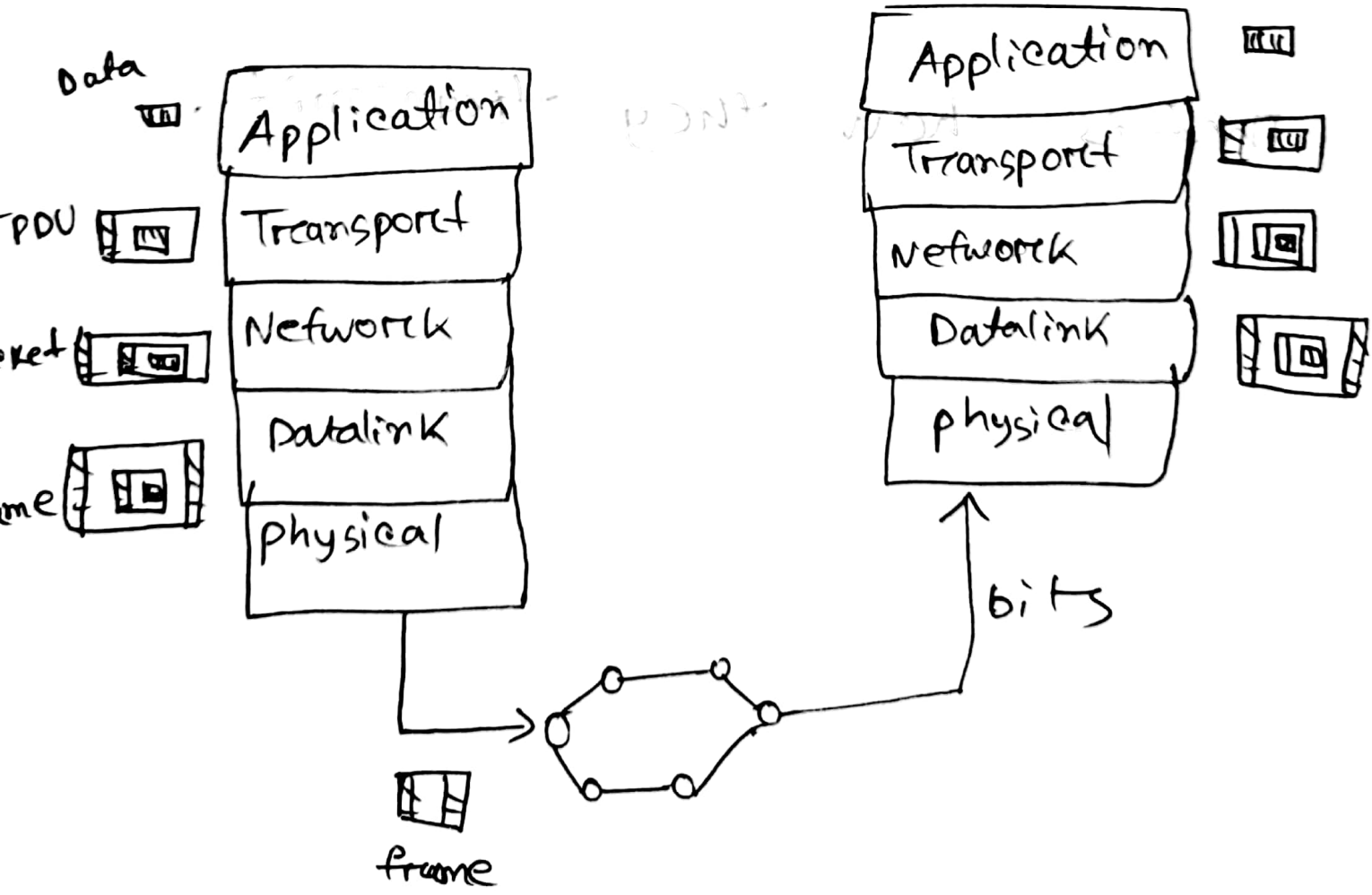
contention period always counted between the two farthest node. Here, we can see the farthest node is E. So, even C is destination, it will propagate to the E.



∴ contention period = 2τ

Ans: to the qu: NO: 1





Here, is the encapsulation. Here packet holds id address, that's why it is in network layer.

~~Destination~~ Id address It goes as a bits ~~frame~~.

Data → tpdu → packet → frame.

That is how they transmit.