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Ans to the Q-2

Here, interested channels are A, B, C, D, G

A = 101101

B = 101110

C = 101010

D = 100010

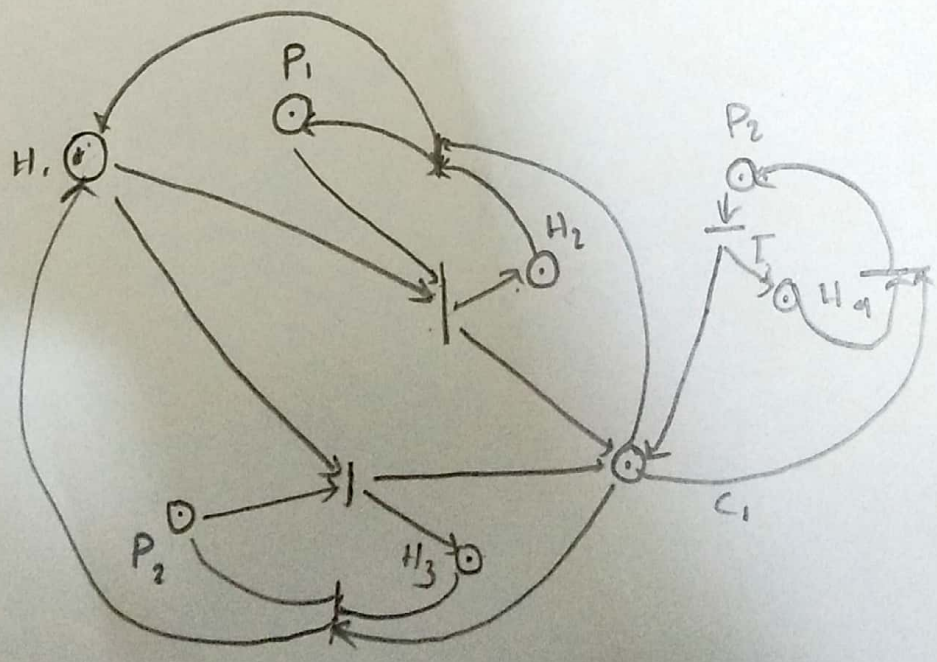
G = 101100

Bitline→	0	1	2	3	4	5
A(101101)	1	0	1	1	0	X
B(101110)	1	0	1	1	1	0
C(101010)	1	0	1	0	X	X
D(100010)	1	0	0	X	X	X
G(101100)	1	0	1	1	0	X
OR→	1	0	1	1	1	0

Here, we can see only B= 101110 will get into saturation by following "binary countdown" Protol.

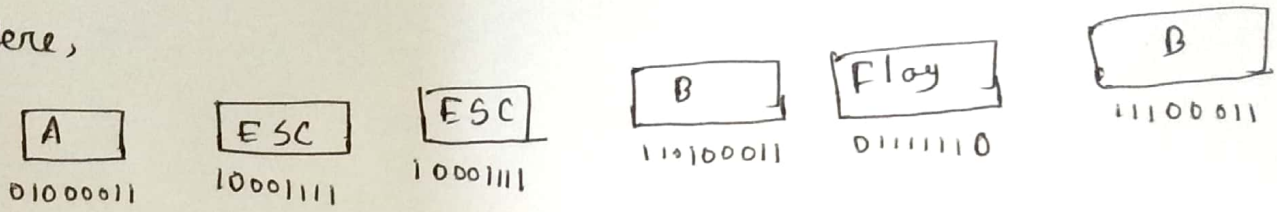
Ans to tw Q-5

In these figure there have some Problem. Here, only we H_1. So, when P_1 going to C_1, P_2 also can reach C_1 and going to arrise some Problems, the solution is:



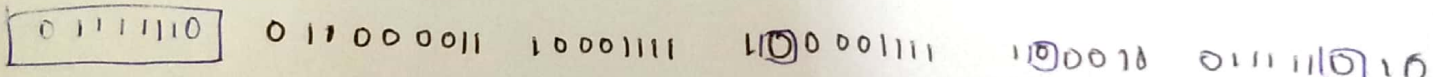
Ans to the Q-2

Here,

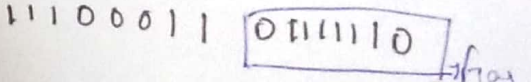


Now,

As it is bit stuffing so there will be a fix flay which will be in starting and ending.



flay start.



flay

Here, Sender will give a zero after every consecutive 5 1's to solve the flay Problem.

Ans to the Q. 3

'A' will pick a number randomly from Set A {0,1,2,3}

whereas 'B' will pick a number randomly from

Let B = {0, 1, 2, 3, 4, 5, 6}

Here, 0,1,2,3 are those numbers, which are common in both set. that is why if 'A' will pick a number from {0,1,2,3} and also 'B' will pick a number from {0,1,2,3} and then they will get into collision consecutively.

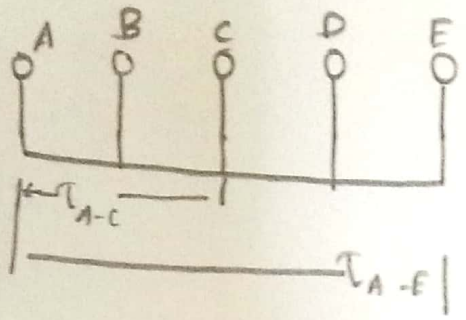
Now, we are using exponential Back off Algorithm. to resolve a collision free transmission even after consecutive collision. It means every system sends the

to ensure no collision.

If A communicate with 'B', then there is not need of BEB Algo. as A can send file repeatedly with B and vice-versa.

So, every system should PFC randomly to it's own set to avoid collision with other system.

Ans to the Q-9



Here C is the intermediate, so the propagation delay for the data transferring. A to C is τ_{A-C}.

the collision will take place at $(\tau_{A-C} - \epsilon)$

∴ the contention period. = $(\tau_{A-C} - \epsilon) + (\tau_{A-C} - \epsilon)$

$= 2\tau_{A-C}$ [∵ $\epsilon = 0$]

Again node A to E.

∴ contention period will = $(\tau_{A-C} - \epsilon) + (\tau_{A-E} - \epsilon)$

$= 2\tau_{A-E}$

Given,

$\tau_{A-E} > \tau_{A-C}$

∴ $2\tau_{A-E} > 2\tau_{A-C}$

Therefore the contention period of A-C is less than A-E. So A will send some amount of data in less time to C instead of E