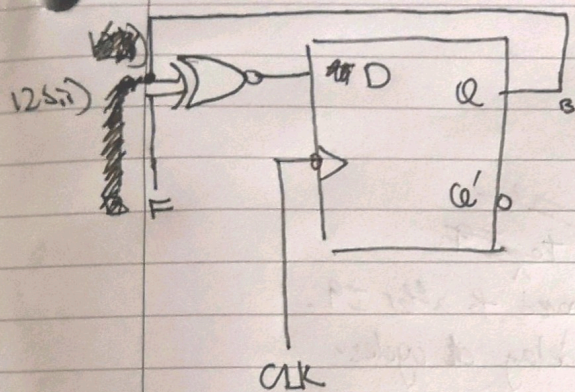
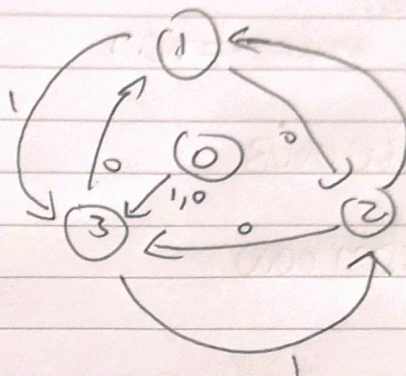


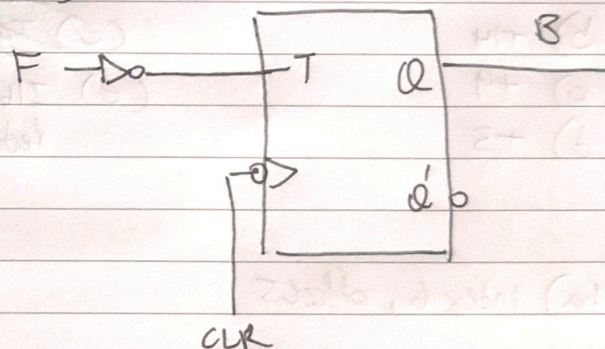
- 1) D 2) B 3) E 4) ~~D~~ 5) A 6) E  
 7) A, B, C 8) C, D, ~~E~~ 9) A, B, D 10) B 11) A, B, D, E

12a)  $JA = 1$   
 $KA = x \cdot B' + x' \cdot B$   
 $K_B = 1$   
 $KB = A \cdot x + A' \cdot x'$

12aiv)



12bi)



~~12bii)~~

13a) ~~12bii)~~

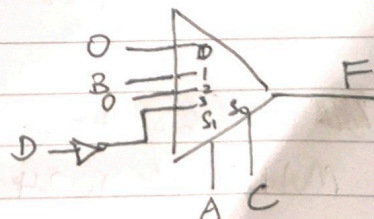
$E = \sum m(8-15)$

$F = \sum m(4-11)$

$G = \sum m(2-5, 10-13)$

$H = \sum m(1, 2, 5, 6, 9, 10, 13, 14)$  (13c)

13b)  $K = A' \cdot B' \cdot C$





14) 17

b) int answer = 0

for (int i = 0, i < size, i++):  
if (A[i] ~~is less than~~ > B[i]):

answer += A[i]

else:

answer -= B[i]

c) 0x1160000B

e) 0x0AC00403

d) 0x8D310000

15a)  $17 + 5 - 1 = 21$

b) +14

c) +9

d) +3

~~IL6 or IL7~~  
(e) ~~IL6~~ can be moved to ~~IL9~~

(e) IL6 or IL7 can be moved to after IL9.  
Reduction of 2 delay cycles

16a) index 6, offset 5

16b)  $\text{Hd rate of A} = \text{Hd rate of B} = 7/8$

c)  $\text{Hd rate of A} = \frac{899}{1028}$

$\text{Hd rate of B} = \frac{899}{1028}$

d) ~~the~~ Hd rate of A = 0.  
Multiple of 1024.



e) offset = 4, index = 1

en) 6

g) 10