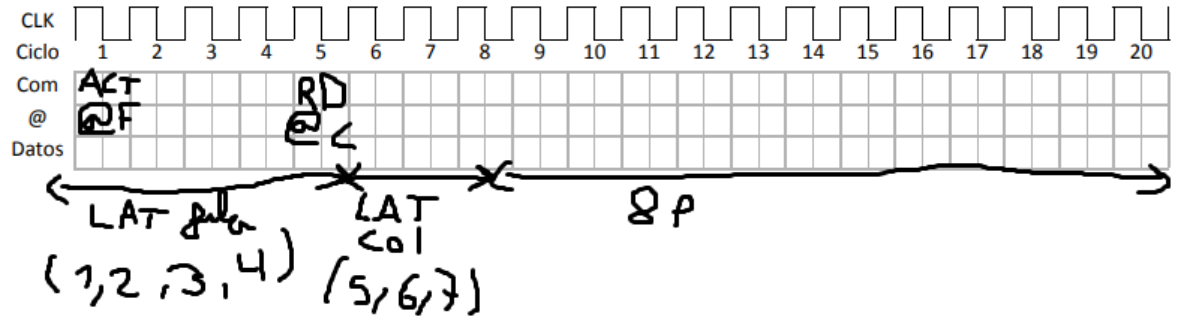
Didado

Sesión 9 Problemas

3.17

a)



b) Tc = 1/200x10^6 = 5ns -> 5ns x 17 ciclos = 85ns
c) Ancho de banda máx teórico 64b/8ciclos = 200x10^6 Hz = 1.6x10^9 bytes/s = 16 GB/s

d) Ancho de banda real 66 bytes / 17 ciclos x 200x10^6 ciclos/s = 752,94 x10^6 bytes/s = 752,94 MB/s

e)
9/25 x 300*10^-3 x 1.5 = 0.162W
8/25 x 800x10^-3 x 1.5 = 0.384W
8/25 x 200x10^-3 x 1.5 = 0.096W

P = 0.642W

P = E/t -> E = Pxt = 0.642 x (100 ciclos x 5x10^-4) = 3.21*10^-7 J

3.18

a) Texe = N x CPI x Tc = 90s
b) 5x10^9 accesos
c) tpf = 13 ciclos
d) Tma = 1+0.1x13= 2.3 ciclos
e) CPI = 1.8 + 1x0.1x13 = 3.1 ciclos/i
f) Texe = NxCPIxTc =155s
g) 0.1x0.7 = 0.07 (7%)

h) 0.1x0.3 = 0.03 (3%)
i) 5 ciclos
j) 15 ciclos