2018190

Setu Gupta

12/11/20

CA - Quiz 2

Q-1.) b.) Only 2

Q-2.) (.) = $2^{\text{index bits}}$

Q-3.) Machine A: $(0.98)(2) + (0.02)(40) = 2.76$ ns

Assuming hit time = time to get data if Cache hit + time to check for hit

Memory access time = time to check for miss + time to get from memory.

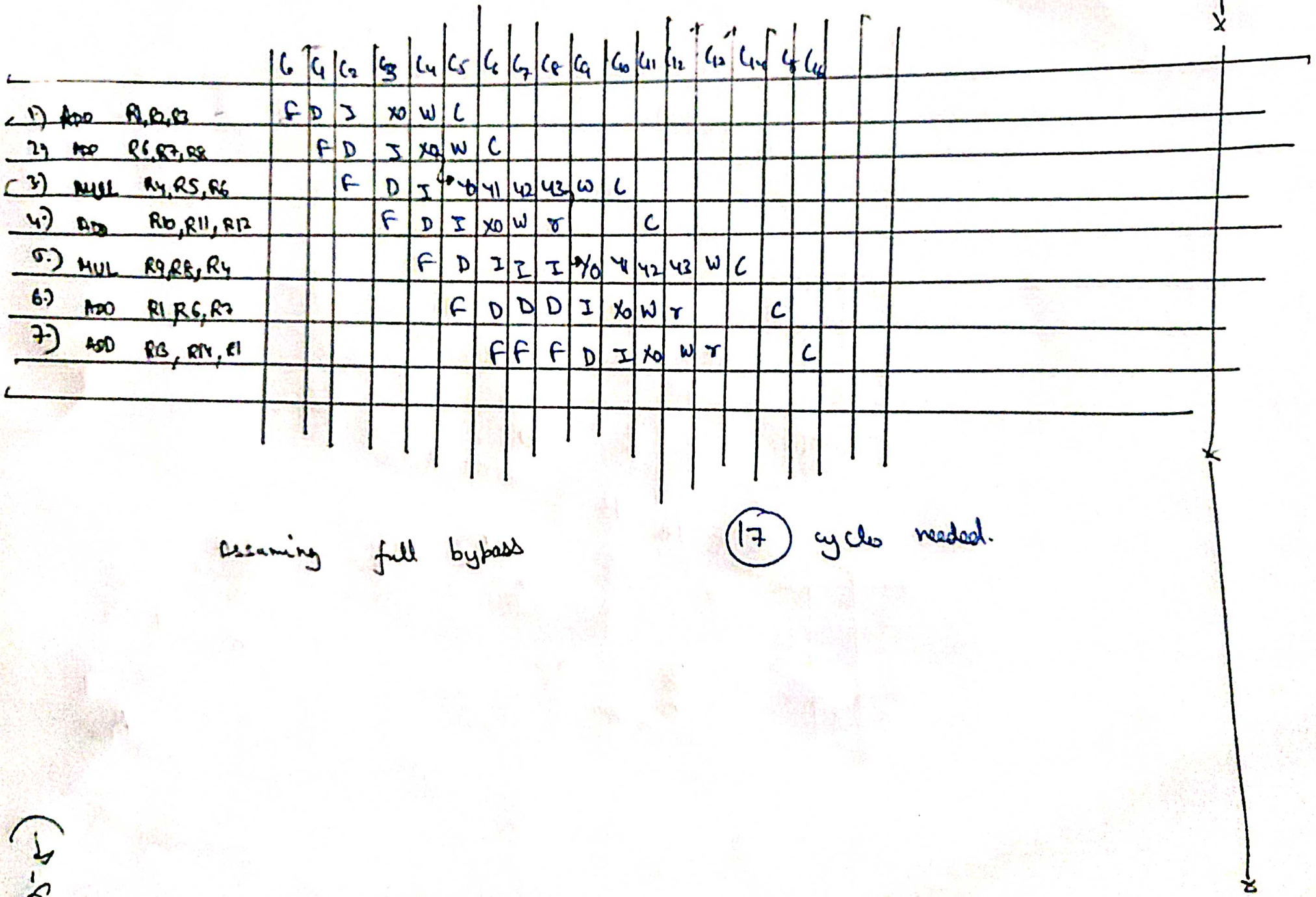
Machine B: $(0.94)(0.5) + (0.06)(40) = 2.87$ ns

B provides best access time.

Speedup = $\frac{2.87}{2.76} \approx 1.04$ x.

Q-4.)

Regs	Pending	Fn unit	Cycles till WB
R7	1	Multiplier	3
R10	1	Adder	1



Assuming full bypass

(17) cycles needed.