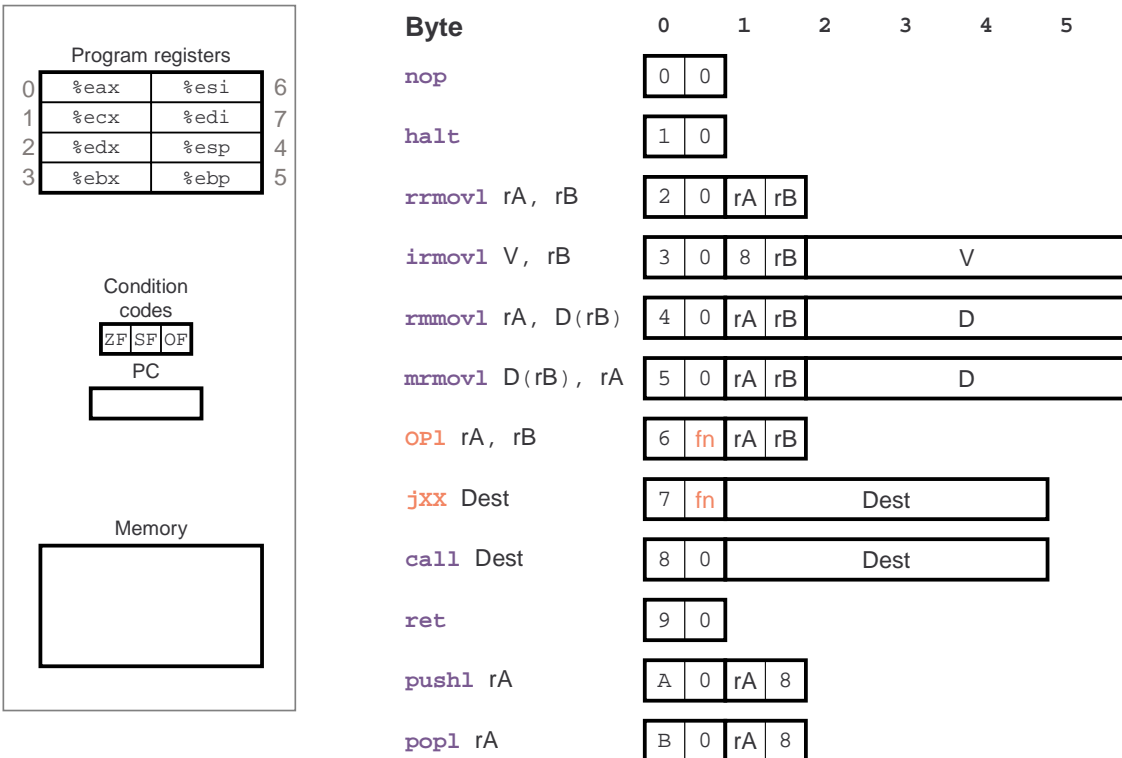You may (carefully, so as to not destroy the staple) remove these last 2 pages from the exam and use them as a reference.

y86: a RISC-like and IA32-like ISA

Program registers

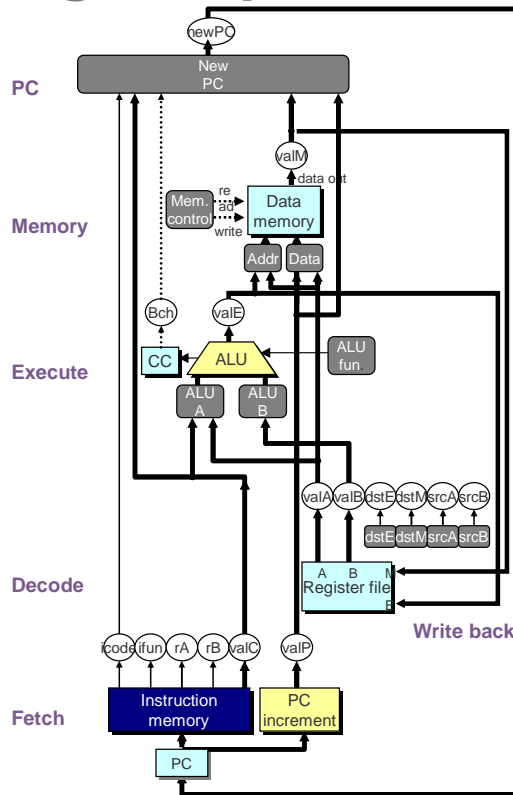|			
0	%eax	%esi	6
1	%ecx	%edi	7
2	%edx	%esp	4
3	%ebx	%ebp	5

Condition codes

ZF SF OF

PC

Memory

Byte	0	1	2	3	4	5
nop	0 0					
halt	1 0					
rrmovl rA, rB	2 0 rA rB					
irmovl V, rB	3 0 8 rB	V				
rmmovl rA, D(rB)	4 0 rA rB	D				
mrmovl D(rB), rA	5 0 rA rB	D				
OP1 rA, rB	6 fn rA rB					
jXX Dest	7 fn	Dest				
call Dest	8 0	Dest				
ret	9 0					
pushl rA	A 0 rA 8					
popl rA	B 0 rA 8					

y86: integer and branch function codes

OP1 rA, rB   6 fn rA rB

jXX Dest   7 fn   Dest

Integer operations

addl	6	0
subl	6	1
andl	6	2
xorl	6	3

Branches

jmp	7	0		**jne**	7	4
jle	7	1		**jge**	7	5
jl	7	2		**jg**	7	6
je	7	3				

stage outputs (the things we need combination circuits to compute)

fetch
- icode, ifun, rA, rB, valC
- valP

decode
- valA, valB
- srcA, srcB

execute
- aluA, aluB, alufun
- set_cc
- Bch
- valE

memory
- mem_addr, mem_data
- mem_read, mem_write
- valM

write back
- dstE, dstM

pc
- new_pc