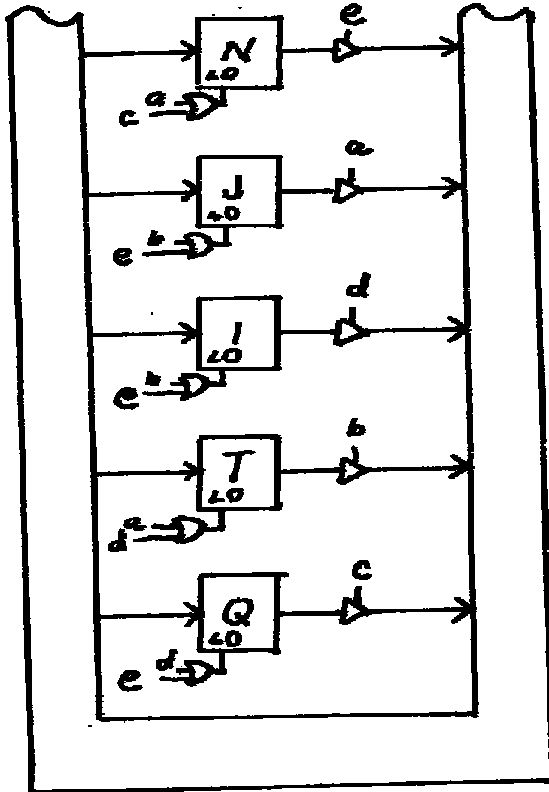


CoE 353H: Honors Advanced Computer Architecture  
 Test #1 Solution  
 Spring 2002

1. a) Indexed  
 b) Indirect  
 c) Direct
2. The computer has 32 bytes of ROM starting at address 00H constructed using  $32 \times 2$  chips; 64 bytes of RAM starting at address 80H constructed using  $32 \times 8$  chips; an input device at address 00H; and an output device at address FFH.

3.



4.

Instruction Code	Operation
AAAAAA00	$AC \leftarrow M[AAAAAA] + 1$
AAAAAA01	$PC \leftarrow AAAAAA + 1$
XXXXXX10	$AC \leftarrow (AC' + 1)'$
XXXXXX11	$AC \leftarrow AC - 1$