|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **IP** | **DL** | **CALL 0200** | **RET** | **SP** | **Stack** |
| 0102 | 41 |  |  | FFFE | 00 00 |
| 0105 | 41 | X |  | FFFE | 00 00 |
| 0200 | 41 |  |  | FFFC | 08 01 00 |
| 0202 | 41 |  |  | FFFC | 08 01 00 |
| 0204 | 41 |  |  | FFFC | 08 01 00 |
| 0206 | 42 |  | X | FFFC | 08 01 00 |
| 0108 | 42 |  |  | FFFE | 00 00 |
| 0105 | 42 | X |  | FFFE | 00 00 |
| 0200 | 42 |  |  | FFFC | 08 01 00 |
| 0202 | 42 |  |  | FFFC | 08 01 00 |
| 0204 | 42 |  |  | FFFC | 08 01 00 |
| 0206 | 43 |  | X | FFFC | 08 01 00 |
| 0108 | 43 |  |  | FFFE | 00 00 |
| 0105 | 43 | X |  | FFFE | 00 00 |
| 0200 | 43 |  |  | FFFC | 08 01 00 |
| 0202 | 43 |  |  | FFFC | 08 01 00 |
| 0204 | 43 |  |  | FFFC | 08 01 00 |
| 0206 | 44 |  | X | FFFC | 08 01 00 |
| 0108 | 44 |  |  | FFFE | 00 00 |
| 0105 | 44 | X |  | FFFE | 00 00 |
| 0200 | 44 |  |  | FFFC | 08 01 00 |
| 0202 | 44 |  |  | FFFC | 08 01 00 |
| 0204 | 44 |  |  | FFFC | 08 01 00 |
| 0206 | 45 |  | X | FFFC | 08 01 00 |
| 0108 | 45 |  |  | FFFE | 00 00 |
| 0105 | 45 | X |  | FFFE | 00 00 |
| 010A | 45 |  |  | FFFE | 00 00 |

1) Las instrucciones CALL y RET implementan la llamada y el retorno de una subrutina. La instrucción CALL “empuja” la dirección de la instrucción ubicada inmediatamente después del CALL en la pila y luego realiza un salto de a la dirección de código especificada. A su vez, la instrucción RET realiza un salto a la dirección almacenada en la pila, removiéndola de la misma.

2) La instrucción INC incrementa en 1 el valor almacenado en DL.

3) Se visualizan los valores de la pila realizando un volcado de memoria en la dirección indicada por el registro de pila (SP).

4)

|  |  |  |  |
| --- | --- | --- | --- |
| **IP** | **Instrucción** | **SP** | **Stack** |
| 0100 | CALL 0200 | FFFF | 00 |
| 0200 | CALL 0300 | FFFD | 03 01 00 |
| 0300 | CALL 0400 | FFFB | 03 02 03 01 00 |
| 0400 | RET | FFF9 | 03 03 03 02 03 01 00 |
| 0303 | RET | FFFB | 03 02 03 01 00 |
| 0203 | RET | FFFD | 03 01 00 |
| 0103 | INT 20 | FFFF | 00 |

5)

6)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **IP** | **SP** | **Pila** | **PUSH** | **POP** | **CALL** | **RET** |
| 0100 | FFFE |  |  |  |  |  |
| 0103 | FFFE |  |  |  |  |  |
| 0106 | FFFE |  |  |  | X |  |
| 0200 | FFFC | 09 01 00 00 | X |  |  |  |
| 0201 | FFFA | FF FF 09 01 00 00 | X |  |  |  |
| 0202 | FFF8 | EE EE FF FF 09 01 00 00 |  |  |  |  |
| 0205 | FFF8 | EE EE FF FF 09 01 00 00 |  |  |  |  |
| 0207 | FFF8 | EE EE FF FF 09 01 00 00 |  |  |  |  |
| 0205 | FFF8 | EE EE FF FF 09 01 00 00 |  |  |  |  |
| 0207 | FFF8 | EE EE FF FF 09 01 00 00 |  |  |  |  |
| 0205 | FFF8 | EE EE FF FF 09 01 00 00 |  |  |  |  |
| 0207 | FFF8 | EE EE FF FF 09 01 00 00 |  |  |  |  |
| 0209 | FFF8 | EE EE FF FF 09 01 00 00 |  |  |  |  |
| 020A | FFFA | FF FF 09 01 00 00 |  | X |  |  |
| 020B | FFFC | FF FF 09 01 00 00 |  | X |  |  |
| 0109 | FFFE |  |  |  |  | X |
|  |  |  |  |  |  |  |