|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| a | b | c | d |  | a | b | c | d |  |
|  |  |  |  |  |  |  |  |  |  |
| 00 | FETCH | NOP | 0 |  | 10 | INC | NOP | 4 |  |
| 01 |  | LTCH INS |  |  | 11 |  | INC ACC |  |  |
| 02 |  | INC PC |  |  | 12 |  | NOP |  |  |
| 03 |  | NOP |  |  | 13 |  | NOP |  |  |
| 04 | LIT | INS DATA | 1 |  | 14 | DEC | NOP | 5 |  |
| 05 |  | LD ACC |  |  | 15 |  | DEC ACC |  |  |
| 06 |  | NOP |  |  | 16 |  | NOP |  |  |
| 07 |  | INS DATA |  |  | 17 |  | NOP |  |  |
| 08 | LOAD | RD REG | 2 |  | 18 | REG | NOP | 6 |  |
| 09 |  | LD ACC |  |  | 19 |  | LTCH REG |  |  |
| 0A |  | NOP |  |  | 1A |  | NOP |  |  |
| 0B |  | RD REG |  |  | 1B |  | NOP |  |  |
| 0C | STORE | NOP | 3 |  | 1C | CMPL | INS DATA | 7 |  |
| 0D |  | WR REG |  |  | 1D |  | LTCH FLAG |  |  |
| 0E |  | NOP |  |  | 1E |  | NOP |  |  |
| 0F |  | NOP |  |  | 1F |  | LTCH FLAG |  |  |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| a | b | c | d |  | a | b | c | d |  |
|  |  |  |  |  |  |  |  |  |  |
| 20 | CMP | RD REG | 8 |  | 30 | JUMPG | NOP | 12 |  |
| 21 |  | LTCH FLAG |  |  | 31 |  | JMPG |  |  |
| 22 |  | NOP |  |  | 32 |  | RST PC |  |  |
| 23 |  | RD REG |  |  | 33 |  | NOP |  |  |
| 24 | RST | NOP | 9 |  | 34 | IN | E IN | 13 |  |
| 25 |  | RST PC |  |  | 35 |  | LD ACC |  |  |
| 26 |  | NOP |  |  | 36 |  | NOP |  |  |
| 27 |  | NOP |  |  | 37 |  | E IN |  |  |
| 28 | JUMPL | NOP | 10 |  | 38 | OUT | RD REG | 14 |  |
| 29 |  | JMPL |  |  | 39 |  | LTCH OUT |  |  |
| 2A |  | RST PC |  |  | 3A |  | NOP |  |  |
| 2B |  | NOP |  |  | 3B |  | RD REG |  |  |
| 2C | JUMPE | NOP | 11 |  | 3C | NOP | NOP | 15 |  |
| 2D |  | JMPE |  |  | 3D |  | NOP |  |  |
| 2E |  | RST PC |  |  | 3E |  | NOP |  |  |
| 2F |  | NOP |  |  | 3F |  | NOP |  |  |