**测试程序：**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 2019计算机组成原理课程设计实验演示程序 | | | | | | | |
|  | 寄存器初值 | R2=60H | R3=0FDH |  |  |  |  |
|  | 存储器初值 | [60H]=67H | [61H]=80H | [62H]=0FDH | [80H]=60 | [0FEH]=03H | [0FFH]=03H |
|  |  |  |  |  |  |  |  |
| 地址 | 程序指令 | 机器码 | 16进制 | R0 | R1 | R2 | R3 |
| 00H | LD R0,[R2] | 0101 0010 | 52 | 67 |  |  |  |
| 01H | INC R2 | 0100 1000 | 48 |  |  | 61 |  |
| 02H | LD R1,[R2] | 0101 0110 | 56 |  | 80 |  |  |
| 03H | ADD R0,R1 | 0001 0001 | 11 | E7  07  86 |  |  |  |
| 04H | JC 06H | 0111 0001 | 71 |  |  |  |  |
| 05H | AND R1,R0 | 0011 0100 | 34 |  | 80  83 (应为82) |  |  |
| 06H | SUB R0,R2 | 0010 0010 | 22 | 86  04  83 |  |  |  |
| 07H | INC R1 | 0100 0100 | 44 |  | 81  82  83 |  |  |
| 08H | STA R0,[R1] | 0110 0100 | 64 | [81]=86  [82]=04  [83]=83 |  |  |  |
| 09H | INC R3 | 0100 1100 | 4c |  |  |  | FE  FF  00 |
| 0AH | JZ 0DH | 1000 0010 | 82 |  |  |  |  |
| 0BH | LD R2,[R3] | 0101 1011 | 5B |  |  | 03 |  |
| 0CH | JMP [R2] | 1001 1000 | 98 |  |  |  |  |
| 0DH | INC R3 | 0100 1100 | 4C |  |  |  | 01 |
| 0EH | INC R3 | 0100 1100 | 4C |  |  |  | 02 |
| 0FH | SUB R0,R2 | 0010 0010 | 22 | 80 |  |  |  |
| 10H | LD R2,[R0] | 0101 1000 | 58 |  |  | 60 |  |
| 11H | ADD R3,R2 | 0001 1110 | 1E |  |  |  | 62 |
| 12H | LD R3,[R3] | 0101 1111 | 5F |  |  |  | FD |
| 13H | OUT R0 | 1010 0000 | A0 |  |  |  |  |
| 14H | STP | 1110 0000 | E0 |  |  |  |  |
|  |  |  |  |  |  |  |  |
| 寄存器检测 | R0=80H | R1=83H | R2=60H | R3=FDH |  |  |  |
| 存储器检测 | [81H]=86H | [82H]=04H | [83H]=83H |  |  |  |  |