|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SR. NO** | **OPCODE** | **INSTRUCTION** | **NO. OF ARGUMENTS** | **OPERAND 1** | **OPERAND 2** | **SIZE** | **MOD R/M** | **+RD** | **NO. OF BYTES** |
| 1 | 89 /r | mov reg32,reg32 | 2 | reg | reg | 2 | Y | N |  |
| 2 | B8+ rd id | mov reg32, imm32 | 2 | reg | imm | 5 | N | Y |  |
| 3 | 8B /r | mov reg32,[mem] | 2 | reg | [mem] | 6 | Y | N |  |
| 4 | C7 /0 id | mov [mem], imm | 2 | [mem] | imm | 10 | Y | N |  |
| 5 | 89 /r | mov [mem],reg32 | 2 | [mem] | reg | 6 | Y | N |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| 6 | 01 /r | add reg32,reg32 | 2 | reg | reg | 2 | Y | N |  |
| 7 | 81 /0 id | add reg32, imm32 | 2 | reg | imm | 3 | Y | N | 4 |
| 8 | 03 /r | add reg32,[mem] | 2 | reg | [mem] | 6 | Y | N |  |
| 9 | 81 /0 id | add [mem], imm32 | 2 | [mem] | imm | 10 | Y | N | 4 |
| 10 | 01 /r | add [mem],reg32 | 2 | [mem] | reg | 6 | Y | N |  |
| 11 | 83 /0 ib | add reg32, imm8 | 2 | reg | imm | 3 | Y | N | 1 |
| 12 | 83 /0 id | add [mem], imm8 | 2 | [mem] | imm | 7 | Y | N | 1 |
|  |  |  |  |  |  |  |  |  |  |
| 13 | 29 /r | sub reg32,reg32 | 2 | reg | reg | 2 | Y | N |  |
| 14 | 81 /5 id | sub reg32, imm32 | 2 | reg | imm | 3 | Y | N | 4 |
| 15 | 2B /r | sub reg32,[mem] | 2 | reg | [mem] | 6 | Y | N |  |
| 16 | 81 /5 id | sub [mem],imm32 | 2 | [mem] | imm | 10 | Y | N | 4 |
| 17 | 29 /r | sub [mem],reg32 | 2 | [mem] | reg | 6 | Y | N |  |
| 18 | 81 /5 ib | sub reg32, imm8 | 2 | reg | imm | 3 | Y | N | 1 |
| 19 | 81 /5 id | sub [mem],imm8 | 2 | [mem] | imm | 7 | Y | N | 1 |
|  |  |  |  |  |  |  |  |  |  |
| 20 | F7 /4 | mul reg32 | 1 | reg |  | 2 | Y | N |  |
| 21 | F7 /4 | mul [mem] | 1 | [mem] |  | 6 | Y | N |  |
| 22 | F7 /6 | div reg32 | 1 | reg |  | 2 | Y | N |  |
| 23 | F7 /6 | div [mem] | 1 | [mem] |  | 6 | Y | N |  |
| 24 | 40+ rd | inc reg32 | 1 | reg |  | 1 | N | Y |  |
| 25 | FF /0 | inc[mem] | 1 | [mem] |  | 6 | Y |  |  |
| 26 | 48+rd | dec reg32 | 1 | reg |  | 1 | N | Y |  |
| 27 | FF /1 | dec[mem] | 1 | [mem] |  | 6 | Y | N |  |
| 28 | 31 /r | xor reg32,reg32 | 2 | reg | reg | 2 | Y | N |  |
| 29 | 81 /6 id | xor reg32,imm32 | 2 | reg | imm | 6 | Y | N | 4 |
| 30 | 33 /r | xor reg32,[mem] | 2 | reg | [mem] | 6 | Y | N |  |
| 31 | 81 /6 id | xor [mem],imm32 | 2 | [mem] | imm | 10 | Y | N | 4 |
| 32 | 31 /r | xor [mem],reg32 | 2 | [mem] | reg | 6 | Y | N |  |
| 33 | 81 /6 ib | xor reg32,imm8 | 2 | reg | imm | 3 | Y | N | 1 |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 34 | 83 /6 ib | xor [mem],imm8 | 2 | [mem] | imm | 7 | Y | N | 1 |
|  |  |  |  |  |  |  |  |  |  |
| 35 | 39 /r | cmp reg32,reg32 | 2 | reg | reg | 2 | Y | N |  |
| 36 | 81 /7 id | cmp reg32,imm | 2 | reg | imm | 3 | Y | N |  |
| 37 | 3B /r | cmp reg32,[mem] | 2 | reg | [mem] | 6 | Y | N |  |
| 38 | 81 /7 id | cmp [mem],imm | 2 | [mem] | imm | 7 | Y | N |  |
| 39 | 39 /r | cmp [mem],reg32 | 2 | [mem] | reg | 6 | Y | N |  |
| 40 | 83 /7 ib | cmp reg32,imm8 | 2 | reg | imm | 3 | Y | N | 1 |
| 41 | 83 /7 ib | cmp [mem],imm8 | 2 | [mem] | imm | 7 | Y | N | 1 |
|  |  |  |  |  |  |  |  |  |  |
| 42 | FF /4 | jmp reg32 | 1 | reg |  | 2 | Y |  |  |
| 43 | FF /4 | jmp [mem] | 1 | [mem] |  | 6 | Y |  |  |
| 44 | 0F 84 cd | jz [mem] | 1 | [mem] |  | 2 | N | N |  |
| 45 | 0F 85 cd | jnz [mem] | 1 | [mem] |  | 2 | N | N |  |