Table Muntasir Ahmed:

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Instructions** | **Hex** | **Opcode** | **RT/RD** | **R-type/ I-type** | **ALU/**  **Memory** | **R.Write** | **SW** | **LW** | **ALUop** | **Function** | **Cin** |
| **NAND** | **3** | **000011** | **1** | **0** | **0** | **1** | **0** | **0** | **10** | **10** | **0** |
| **NOR** | **8** | **001000** | **1** | **0** | **0** | **1** | **0** | **0** | **00** | **11** | **0** |
| **XOR** | **4** | **000100** | **1** | **0** | **0** | **1** | **0** | **0** | **11** | **01** | **0** |
| **Add** | **0** | **000000** | **1** | **0** | **0** | **1** | **0** | **0** | **11** | **10** | **0** |
| **Sub** | **1** | **000001** | **1** | **0** | **0** | **1** | **0** | **0** | **00** | **01** | **1** |
| **Addi** | **6** | **000110** | **0** | **1** | **0** | **1** | **0** | **0** | **11** | **10** | **0** |
| **Subi** | **7** | **000111** | **0** | **1** | **0** | **1** | **0** | **0** | **00** | **01** | **1** |
| **Mul** | **b = 11** | **001011** | **1** | **0** | **0** | **1** | **0** | **0** | **11** | **11** | **0** |
| **Muli** | **c = 12** | **001100** | **0** | **1** | **0** | **1** | **0** | **0** | **11** | **11** | **0** |
| **Sw** | **d = 13** | **001101** | **0** | **1** | **0** | **0** | **1** | **0** | **11** | **10** | **0** |
| **Lw** | **f = 15** | **001111** | **0** | **1** | **1** | **1** | **0** | **1** | **11** | **10** | **0** |

Op5Op4Op3Op2Op1’Op0’

Op5Op4Op3’Op2Op1Op0

Op5Op4Op3Op2’Op1Op0

Op5Op4Op3Op2Op1Op0

Op5Op4Op3Op2Op1Op0’

Op5Op4Op3Op2’Op1’Op0

Op5Op4Op3Op2’Op1’Op0’

Op5Op4Op3’Op2Op1’Op0’

Op5Op4Op3’Op2’Op1Op0

Op5Op4Op3’Op2’Op1Op0’

Op5Op4Op3’Op2’Op1’Op0’