Part 1 Output Tables (the Hex column should express each row as a hexadecimal value)

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| R9 🡨 NOT (RB) | | | | | | | | | | |
| State  (2 bits) | OPR  (4 bits) | Addr  (4 bits) | WordR | WordW | T1CE | T1OE | T2CE | T2OE | Next State | Hex  (16 bit) |
| 00 |  |  |  |  |  |  |  |  |  |  |
| 01 |  |  |  |  |  |  |  |  |  |  |
| 10 |  |  |  |  |  |  |  |  |  |  |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| R8 🡨 RB – R9 | | | | | | | | | | |
| State  (2 bits) | OPR  (4 bits) | Addr  (4 bits) | WordR | WordW | T1CE | T1OE | T2CE | T2OE | Next State | Hex  (16 bit) |
| 00 |  |  |  |  |  |  |  |  |  |  |
| 01 |  |  |  |  |  |  |  |  |  |  |
| 10 |  |  |  |  |  |  |  |  |  |  |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| RA 🡨 R8 XOR R9 | | | | | | | | | | |
| State  (2 bits) | OPR  (4 bits) | Addr  (4 bits) | WordR | WordW | T1CE | T1OE | T2CE | T2OE | Next State | Hex  (16 bit) |
| 00 |  |  |  |  |  |  |  |  |  |  |
| 01 |  |  |  |  |  |  |  |  |  |  |
| 10 |  |  |  |  |  |  |  |  |  |  |

Part 2 Output Table (the Hex column should express each row as a hexadecimal value)

NOTE: I do not include the State/Next State in the Hex

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| State | AOP | ANOP | DR | SXR | SYR | WordR | WordW | T1CE | T1OE | T2CE | T2OE | Next State | Hex |
| 00 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 01 | 2A8 |
| 01 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 10 | 466 |
| 10 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 11 | 311 |
| 11 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 00/01 | 200 |

Part 2 Encoded Instruction Table

|  |  |
| --- | --- |
| Operation | Encoded 16-bit Value |
| R9 🡨 NOT (RB) |  |
| R8 🡨 RB – R9 |  |
| RA 🡨 R8 XOR R9 |  |