## 0.1 Zakodowane wejsc, wyjsc i stanow wewnetrznych

|       | Z |
|-------|---|
| $z_0$ | 0 |
| $z_1$ | 1 |

|       | Y |
|-------|---|
| $y_0$ | 0 |
| $y_1$ | 1 |

|       | $Q_2$ | $Q_1$ | $Q_0$ |
|-------|-------|-------|-------|
| $q_0$ | 0     | 0     | 0     |
| $q_1$ | 0     | 0     | 1     |
| $q_2$ | 0     | 1     | 0     |
| $q_3$ | 0     | 1     | 1     |
| $q_4$ | 1     | 0     | 0     |
| $q_5$ | 1     | 0     | 1     |
| $q_6$ | 1     | 1     | 0     |
|       |       |       |       |

## 0.2 Zakodowane przejscia stanow

| t     | t+1   |
|-------|---|
| $q_0$ | $q_1$   |
| $q_1$ | $q_2$   |
| $q_2$ | $q_3$   |
| $q_3$ | $q_6$   |
| $q_4$ | $q_0$   |
| $q_5$ | $q_4$   |
| $q_6$ | $q_5$   |
| $q_0$ | $q_4$   |
| $q_1$ | $q_0$   |
| $q_2$ | $q_1$   |
| $q_3$ | $q_2$   |
| $q_4$ | $q_5$   |
| $q_5$ | $q_6$   |
| $q_6$ | $q_3$   |
|       | q0   q1   q2   q3   q4   q5   q6   q1   q2   q3   q4   q5 |

## 0.3 Tabela przejsc dla przerzutnikow JK

|   |       | t     |       |       | t+1   |       |       | F     | rzerz | zutnik | ci    |       |
|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|-------|-------|
| Z | $Q_2$ | $Q_1$ | $Q_0$ | $Q_2$ | $Q_1$ | $Q_0$ | $J_2$ | $K_2$ | $J_1$ | $K_1$  | $J_0$ | $K_0$ |
| 0 | 0     | 0     | 0     | 0     | 0     | 1     | 0     | *     | 0     | *      | 1     | *     |
| 0 | 0     | 0     | 1     | 0     | 1     | 0     | 0     | *     | 1     | *      | *     | 1     |
| 0 | 0     | 1     | 0     | 0     | 1     | 1     | 0     | *     | *     | 0      | 1     | *     |
| 0 | 0     | 1     | 1     | 1     | 1     | 0     | 1     | *     | *     | 0      | *     | 1     |
| 0 | 1     | 0     | 0     | 0     | 0     | 0     | *     | 1     | 0     | *      | 0     | *     |
| 0 | 1     | 0     | 1     | 1     | 0     | 0     | *     | 0     | 0     | *      | *     | 1     |
| 0 | 1     | 1     | 0     | 1     | 0     | 1     | *     | 0     | *     | 1      | 1     | *     |
| 1 | 0     | 0     | 0     | 1     | 0     | 0     | 1     | *     | 0     | *      | 0     | *     |
| 1 | 0     | 0     | 1     | 0     | 0     | 0     | 0     | *     | 0     | *      | *     | 1     |
| 1 | 0     | 1     | 0     | 0     | 0     | 1     | 0     | *     | *     | 1      | 1     | *     |
| 1 | 0     | 1     | 1     | 0     | 1     | 0     | 0     | *     | *     | 0      | *     | 1     |
| 1 | 1     | 0     | 0     | 1     | 0     | 1     | *     | 0     | 0     | *      | 1     | *     |
| 1 | 1     | 0     | 1     | 1     | 1     | 0     | *     | 0     | 1     | *      | *     | 1     |
| 1 | 1     | 1     | 0     | 0     | 1     | 1     | *     | 1     | *     | 0      | 1     | *     |

## 0.4 Minimalizacja metoda Karnough dla przerzutkow JK

|                 | $J_2$ |    |    |    |
|-----------------|-------|----|----|----|
| $ZQ_2 / Q_1Q_0$ | 00    | 01 | 11 | 10 |
| 00              | 0     | 0  | 1  | 0  |
| 01              | *     | *  | *  | *  |
| 11              | *     | *  | *  | *  |
| 10              | 1     | 0  | 0  | 0  |

|                 | $J_1$ |    |    |    |
|-----------------|-------|----|----|----|
| $ZQ_2 / Q_1Q_0$ | 00    | 01 | 11 | 10 |
| 00              | 0     | 1  | *  | *  |
| 01              | 0     | 0  | *  | *  |
| 11              | 0     | 1  | *  | *  |
| 10              | 0     | 0  | *  | *  |

$$J_1 = ZQ_2Q_0 + \overline{ZQ}_2Q_0$$

| $J_0$           |    |    |    |    |  |  |  |
|-----------------|----|----|----|----|--|--|--|
| $ZQ_2 / Q_1Q_0$ | 00 | 01 | 11 | 10 |  |  |  |
| 00              | 1  | *  | *  | 1  |  |  |  |
| 01              | 0  | *  | *  | 1  |  |  |  |
| 11              | 1  | *  | *  | 1  |  |  |  |
| 10              | 0  | *  | *  | 1  |  |  |  |

$$J_0 = ZQ_2 + \overline{ZQ}_2 + Q_1$$

| $K_2$           |    |    |    |    |  |  |  |
|-----------------|----|----|----|----|--|--|--|
| $ZQ_2 / Q_1Q_0$ | 00 | 01 | 11 | 10 |  |  |  |
| 00              | *  | *  | *  | *  |  |  |  |
| 01              | 1  | 0  | *  | 0  |  |  |  |
| 11              | 0  | 0  | *  | 1  |  |  |  |
| 10              | *  | *  | *  | *  |  |  |  |

$$K_2 = ZQ_1 + \overline{ZQ_1}\overline{Q_0}$$

| $K_1$           |    |    |    |    |  |  |  |
|-----------------|----|----|----|----|--|--|--|
| $ZQ_2 / Q_1Q_0$ | 00 | 01 | 11 | 10 |  |  |  |
| 00              | *  | *  | 0  | 0  |  |  |  |
| 01              | *  | *  | *  | 1  |  |  |  |
| 11              | *  | *  | *  | 0  |  |  |  |
| 10              | *  | *  | 0  | 1  |  |  |  |

$$K_1 = Z\overline{Q}_2\overline{Q}_0 + \overline{Z}Q_2$$

|                 | $K_0$ |    |    |    |
|-----------------|-------|----|----|----|
| $ZQ_2 / Q_1Q_0$ | 00    | 01 | 11 | 10 |
| 00              | *     | 1  | 1  | *  |
| 01              | *     | 1  | *  | *  |
| 11              | *     | 1  | *  | *  |
| 10              | *     | 1  | 1  | *  |

$$K_0 = 1$$