

| Initial state |      | Initial input |       | Initial output | Next state |          | Flip-flop input conditions |       |       |       |
|---------------|------|---------------|-------|----------------|------------|----------|----------------------------|-------|-------|-------|
| A(t)          | B(t) | X1(t)         | X2(t) |                | A(t + 1)   | B(t + 1) | FFA                        |       | FFB   |       |
|               |      |               |       | Y(t)           |            |          | SA(t)                      | RA(t) | SB(t) | RB(t) |
| 0             | 0    | 0             | 1     | 0              | 0          | 1        | 0                          | ×     | 1     | 0     |
| 0             | 1    | 0             | 1     | 0              | 0          | 0        | 0                          | ×     | 0     | 1     |
| 1             | 1    | 0             | 1     | 0              | 1          | 0        | ×                          | 0     | 0     | 1     |
| 1             | 0    | 0             | 1     | 0              | 1          | 1        | ×                          | 0     | 1     | 0     |
| 0             | 0    | 1             | 1     | 0              | 1          | 0        | 1                          | 0     | 0     | ×     |
| 0             | 1    | 1             | 1     | 0              | 1          | 1        | 1                          | 0     | ×     | 0     |
| 1             | 1    | 1             | 1     | 1              | 1          | 1        | ×                          | 0     | ×     | 0     |
| 1             | 0    | 1             | 1     | 1              | 0          | 0        | 0                          | 1     | 0     | ×     |
| 0             | 0    | 1             | 0     | 1              | 1          | 0        | 1                          | 0     | 0     | ×     |
| 0             | 1    | 1             | 0     | 1              | 1          | 1        | 1                          | 0     | ×     | 0     |
| 1             | 1    | 1             | 0     | 0              | 0          | 0        | 0                          | 1     | 0     | 1     |
| 1             | 0    | 1             | 0     | 0              | 1          | 0        | ×                          | 0     | 0     | ×     |