Лабораторная работа 2

Синтез ДД преобразователя кода

Ex.: 843(-2) 441(-2)

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 8 | 4 | 3 | (-2) | 4 | 4 | 1 | (-2) |
|  | X1 | X2 | X3 | X4 | Y1 | Y2 | Y3 | Y4 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 0 |
| 2 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| 3 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 1 |
| 4 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 |
| 5 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 0 |
| 6 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 1 |
| 7 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 |
| 8 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 |
| 9 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 |
|  | 0 | 0 | 0 | 1 | \* | \* | \* | \* |
|  | 1 | 0 | 1 | 0 | \* | \* | \* | \* |
|  | 1 | 1 | 0 | 0 | \* | \* | \* | \* |
|  | 1 | 1 | 0 | 1 | \* | \* | \* | \* |
|  | 1 | 1 | 1 | 0 | \* | \* | \* | \* |
|  | 1 | 1 | 1 | 1 | \* | \* | \* | \* |

1. Составляем таблицу истинности
2. Минимизируем логические функции

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  x1x2x3x4 | 00 | 01 | 11 | 10 |
| 00 |  |  | \* | 1 |
| 01 | \* |  | \* | 1 |
| 11 |  | 1 | \* | 1 |
| 10 |  | 1 | \* | \* |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  x1x2x3x4 | 00 | 01 | 11 | 10 |
| 00 |  | 1 | \* | 1 |
| 01 | \* | 1 | \* | 1 |
| 11 |  |  | \* | 1 |
| 10 | 1 | 1 | \* | \* |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  x1x2x3x4 | 00 | 01 | 11 | 10 |
| 00 |  |  | \* |  |
| 01 | \* |  | \* |  |
| 11 | 1 | 1 | \* | 1 |
| 10 | 1 | 1 | \* | \* |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  x1x2x3x4 | 00 | 01 | 11 | 10 |
| 00 |  |  | \* |  |
| 01 | \* | 1 | \* | 1 |
| 11 | 1 |  | \* |  |
| 10 |  | 1 | \* | \* |

1. Приводим к логискому базису и-не

 используем Buffer1. Реализуем схему
 |

