

$$3) f_3(A, B, C, D) = \sum(0, 2, 4, 5, 7, 9, 10, 12, 14)$$

| A | B | C | D | $f_3$ |
|---|---|---|---|-------|
| 0 | 0 | 0 | 0 | 1     |
| 0 | 0 | 0 | 1 | 0     |
| 0 | 0 | 1 | 0 | 1     |
| 0 | 0 | 1 | 1 | 0     |
| 0 | 1 | 0 | 0 | 1     |
| 0 | 1 | 0 | 1 | 1     |
| 0 | 1 | 1 | 0 | 0     |
| 0 | 1 | 1 | 1 | 1     |
| 1 | 0 | 0 | 0 | 0     |
| 1 | 0 | 0 | 1 | 1     |
| 1 | 0 | 1 | 0 | 1     |
| 1 | 0 | 1 | 1 | 0     |
| 1 | 1 | 0 | 0 | 1     |
| 1 | 1 | 0 | 1 | 0     |
| 1 | 1 | 1 | 0 | 1     |
| 1 | 1 | 1 | 1 | 0     |

$$f_3 = \bar{A}\bar{B}\bar{C}\bar{D} + \bar{A}\bar{B}C\bar{D} + \bar{A}B\bar{C}\bar{D} + \bar{A}B\bar{C}D + \bar{A}BCD + A\bar{B}\bar{C}\bar{D} + A\bar{B}C\bar{D} + A\bar{B}C\bar{D}$$