2.

(a) Draw the Karnaugh maps for and .

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ab  cd | 00 | 01 | 11 | 10 |
| 00 | t |  |  |  |
| 01 |  |  |  |  |
| 11 |  |  | t |  |
| 10 |  |  |  |  |

:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ab  cd | 00 | 01 | 11 | 10 |
| 00 |  | t | t | t |
| 01 | t | t | t | t |
| 11 | t | t |  | t |
| 10 | t | t | t | t |

(b) Find the nonredundant prime implicant representation for and .

:

：

(c) Give a test set that satisfies implicant coverage (IC) for f .

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | a | b | c | d |
|  | F | F | F | F |
|  | T | T | T | T |
|  | F |  | T |  |
|  |  | T | F |  |
|  |  |  | T | F |
|  | T | F |  |  |

f的蕴含集{ }

f满足IC的测试用例集：{FFFF，TTTT，FTTF，FTFF，TFFF}。

(d) Give a test set that satisfies unique true point coverage (UTPC) for f .

：{FFFF}

：{TTTT}

：{FFFT,FFTT,FTTT}

：{FTFF,TTFF,TTFT}

：{FFTF,FTTF,TTTF}

: {TFFF,TFFT,TFTT}

f满足UTPC的测试用例集：{FFFF，TTTT，FFTT，FTFT，TTTF，TFFF}