

QUIZ 2 FOR M325K

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|---------------|
| Name: _____ |
| UT EID: _____ |

Consider the truth table

| p | q | r | |
|---|---|---|---|
| 1 | 1 | 1 | 1 |
| 1 | 1 | 0 | 0 |
| 1 | 0 | 1 | 1 |
| 1 | 0 | 0 | 1 |
| 0 | 1 | 1 | 1 |
| 0 | 1 | 0 | 0 |
| 0 | 0 | 1 | 0 |
| 0 | 0 | 0 | 0 |

(1) [2 points] Write a conjunctive normal form for the proposition define by the truth table.

(2) [2 points] Write an unoptimized disjunctive normal form for the proposition define by the truth table.

(3) [3 points] Complete the Karnaugh map

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(4) [3 points] Using the Karnaugh map write an optimized disjunctive normal form for the proposition defined by the truth table.