Name:\_\_\_Markus Afonso\_\_\_\_\_\_

**MATH 1310 –** *Technical Math for IT*

Set:\_\_\_\_\_\_\_\_\_\_\_C\_\_\_\_\_\_\_\_\_\_\_\_

**ASSIGNMENT 5**

**Due:** Start of the class, Oct 31 (Set B and Set C), Nov 3 (Set A)

This is how I mark this assignment:

50 percent: I scan all the questions to see if they are solved or not.

50 percent: I select a few parts randomly and mark them in detail.

**24 marks. Complete all work on separate pages. Work must be clear and complete to receive full marks.**

Consider the Boolean expression



1. [3] Construct the truth table for *F* , without any simplification

A picture containing chart

Description automatically generated

1. [2] Find canonical SOP and POS forms using the truth table in part a)

A picture containing diagram

Description automatically generated

1. [2] Create Karnaugh map corresponding to the truth table in part a)

Diagram

Description automatically generated with low confidence

1. [4] Find optimal SOP and POS using the karnaugh map

Diagram, text, whiteboard

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1. [6] Starting from original expression, use postulates/theorems of Boolean algebra to reach optimal SOP form you found in section d)

Text

Description automatically generated

1. [4] Starring from optimal SOP form, use postulates/theorems of Boolean algebra to reach optimal POS from

Text, letter

Description automatically generated

1. [2] Construct truth table for optimal SOP and POS form

A picture containing table

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1. [1] Do they match with the original truth table in part a)? what is the conclusion?

Text

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