MARA UNIVERSITY OF TECHNOLOGY
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TITLE : DIGI TEACHER
AS A TEACHING AID

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ABSTRACT

'Digi Teacher's, as teaching aid is very useful as a teaching aid for a student of digital electronics. In digital system, the popular gates are used liked AND gates, OR gates, EX- OR gates, Inverter gates, NAND gates, NOR gates, EX-NOR gates and buffer. In Digi teacher application focuses on the outputs that neither can be obtained from certain inputs, after being through NOR gates and INVERTER (ICs).

The studies of the IC's such as 7402 quadruple 2- input NOR-Gates, 7404 Hex INVERTER and LED was made and evaluated. This unit can be improved by using rotary switch and three 7402 quad 2- input NAND-gates IC's for better and easy handling for beginners.

In Digi Teacher, the user no need to memorized al the basic truth table for all the logic gates. In this case, Digi Teacher was developed for improved the general truth table where it's as a teaching aid, which can test all the gates in the digital electronic.

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MAY GOD BLESS ALL OF YOU , AMIN...

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1.0 INTRODUCTION

The unit was developed as a teaching aid, which can test all the gates of the digital electronics. Digital electronics is simply a collection of switching circuit combined in such a way as to allow certain output with inputs. These are called gates as they allow only certain function to pass through.

OR, AND, EX-OR and NOT (inverter) are some popular gates. There are also gates called NOR (meaning NOT OR), NAND (meaning NOT AND) and EX-NOR (meaning NOT EX –OR) where the output are inverter equivalents of OR, AND, EX-OR functions respectively. The latter gates will be frequently used in circuit in preference to their universal equivalents, in order to save the number of gates used. In this circuit NOR and INVERTER gates are used to minimize the number of IC's. The circuit is quite simple as shown as figure 1.