UNIVERSITI TEKNOLOGI MARA

SMART SOLAR

MOHAMAD NAIM BIN JAMALLUDDIN

NURAMALINA BINTI MOHD RADZI

AMIR FIRDAUS BIN MUSTAFA KAMAL

FACULTY OF ELECTRICAL ENGINEERING

UNIVERSITY TECHNOLOGY MARA

DUNGUN, TERENGGANU

MARCH 2015

"I declare that this report entitled "**SMART SOLAR**" is the result of my own group research except as cited in the references. The report has not been accepted for any diploma and is not concurrently submitted in candidature of any other diploma".

Signature : ....

Name   : MOHAMAD NAIM BIN JAMALLUDDIN

Date   : MARCH 2015

Signature : ....

Name   : NURAMALINA BINTI MOHD RADZI

Date   : MARCH 2015

Signature : ....

Name   : AMIR FIRDAUS BIN MUSTAFA KAMAL

Date   : MARCH 2015

ACKNOWLEDGEMENT

Assalamualaikum W.B.T.

All praises for Allah S.W.T the Lord Almighty and Salam to Nabi Muhammad S.A.W.

First of all, we would like to wish our grateful to Allah S.W.T because give us opportunity and bless us to complete our project within the time given. Then we would like to express our gratitude to our supervisor, Miss Nur Haffizah Bt Hassan for helping us and her/ his patience. Furthermore, we would like to thanks to our classmates for helping us to give some information to complete our project.

A million thanks to our lovely parents, because give us the spirit, support and cooperation with us.

Lastly, thanks to the individual who helps us to complete our task. There is nothing could be done in this world without the team work and the support given to us.

Thank you.

ABSTARCT

This project represents generating electricity using solar plate. This project was design to avoid excessive usage of electricity that already exist during the day and store generated electricity in a battery to be used during night and emergency. The flow of the project can be divided into two parts which is energy harvesting and light up the LED during the night. In energy harvesting, solar plate is used to generate electricity. From the solar plate, it can generate up to 21V and need to be regulating the voltage to 13.5V- 13.8V, and then charging the battery. To light up the LED, the voltage stored in the battery is used and by using PIR sensor, it can sense the human presence. Then, a timer is used to delay the duration of the LED.

TABLE OF CONTENTS