**DECLARATION**

We hereby declare that this submission is our own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person nor material which to a substantial extent has been accepted for the award of any other degree of the university or other institute of higher learning, except where due acknowledgment has been in the text.

Signature-

Name-:X

Roll No. - (121……)

Date-

Signature-

Name-:Y

Roll No. - (121……)

Date-

Signature-

Name-:Z

Roll No. - (121……)

Date-

Signature-

Name- : S

Roll No. - (121……)

Date-

**CERTIFICATE**

This is to certify that the project entitled **“SOLAR TRACKER”** submitted by **NAME WITH ROLL NO** in the partial fulfillment of the requirements for award of **Bachelor of Technology** in **Electronics and Communication Engineering** from **Uttar Pradesh Technical University, Lucknow** under my supervision. The project embodies result of original work and studies carried out by the student’s them selves and the contents of the project do not form the basis for the award of any other degree to the candidate or to anybody else from this or any other University/Institution.

Prof: XYZ

H.O.D (ECE)

NIET, Greater Noida

(Guide)

**ABSTRACT**

Solar energy is rapidly gaining notoriety as an important means of expanding renewable energy resources.As such, it is vital that those in engineering fields understand the technologies associated with this area. Our project will include the design and construction of a microcontroller-based solar panel tracking system. Solar tracking allows more energy to be produced because the solar array is able to remain aligned to the sun. This system builds upon topics learned in this course. A working system is ultimately be demonstrate to validate the design. Problems and possible improvements are also be presented.

# ACKNOWLEDGEMENT

In the absence of mother the birth of a child is not possible and in the absence of teacher the right path of knowledge is impossible. This project is by far the most significant accomplishment in our life and it would be impossible without people who supported us and believed us.

We would like to extend my gratitude and my sincere thanks to my honorable, esteemed guide Professor ***xyz*** (H.O.D (ECE)), Department of Electronics and Communication Engineering, NIET, Greater Noida for their immeasurable guidance and valuable time that he devoted for project. We sincerely thank for their exemplary guidance and encouragement. His trust and support inspired me in the most important moments of making right decisions and we are glad to work with him.

Also we would also like to give thanks to our project co-coordinator Mr. xyz (Assistant Professor (ECE)) and all the faculty of Electronics and communication department for their support, help and encouragement during this work.

We would like to thank all my friends for all the thoughtful and mind stimulating discussions we had, which prompted us to think beyond the obvious.

We have enjoyed their companionship so much during my stay at NIET, Greater Noida. We would like to thank all those who made my stay in NIET, Greater Noida an unforgettable and rewarding experience.

A boat held to its moorings will see the floods pass by; but detached of its moorings, may not survive the flood. The support of all the members of our family (specially our Parents, and

Grand-parents, our elder sisters and our loving younger brother and sister) motivated us to work even while facing the Blues. We dedicate this work to them.

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y (1213……...)

z (1213……...)

s (1213………)

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**ABBREVIATIONS**

AADAT Azimuth-Altitude dual axis trackers

DC Direct current

DOF Degrees of Freedom

HSAT Horizontal single axis trackers

MPPT Maximum Power Point Tracking

PV Photovoltaic

PV panels Photovoltaic panels

VSAT Vertical single axis trackers

**LIST OF SYMBOLS**

**A Altitude angle torque

* B* Azimuth angle torque

θz Altitude angle

θA Azimuth angle

MoU Memorandum of understanding