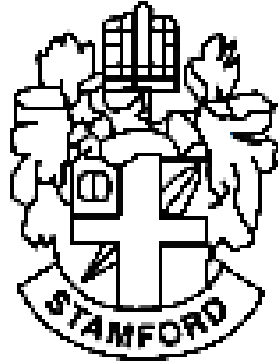


# **Stamford University Bangladesh**

**Department of Electrical and Electronics Engineering**



**Thesis on**  
**Study of substation and the protection**

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# **STUDY OF SUBSTATION AND THE PROTECTION**

**A thesis submitted to the Department of Electrical and Electronics Engineering, Stamford University of Bangladesh, for the partial fulfillment of the degree of Bachelor of Science in Electrical and Electronics Engineering.**

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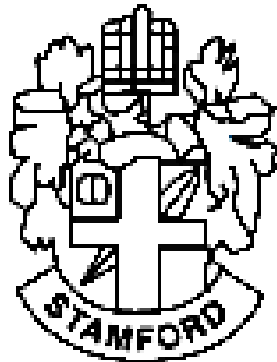
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## DECLARATION

It is hereby declared that the thesis report titled “Study of Substation and Protection” presented to the department of the investigation carried out by us under the supervisor of **Lecturer Md. Atiqul Islam**, Department of Electrical and Engineering, Stamford University Bangladesh.

This has been performed by us and any part of it has not been submitted elsewhere for the award of any degree or diploma.

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# Abstract

**In this thesis work a detail study on substation and its protection system has been done. An electrical substation is a subsidiary station of an electricity generation, transmission and distribution system where voltage is transformed from high to low or the reverse using transformers. Electric power may flow through several substations between generating plant and consumer, and may be changed in voltage in several steps. A substation that has a step-up transformer increases the voltage while decreasing the current, while a step-down transformer decreases the voltage while increasing the current for domestic and commercial distribution. The word *substation* comes from the days before the distribution system became a grid. The first substations were connected to only one power station where the generator was housed, and were subsidiaries of that power station. There some use protective device such as in a Circuit breaker, Relay, Isolator, Lightning arrester, Fuse etc. It is hoped that this work will be useful for future generation researches to find the relevant references to advance the research work in future.**

**Dedicated to:**  
**Our Teachers**