PROTECTION OF GENERATOR FROM VARIOUS PARAMETERS

SIMULATION BASED NUMERIC RELAY

Project Advisor

Mr. Waseem Iqbal

Members

M. Omar Safdar **101519010**

Maaz Bin Tufail **101519091**

Awais Ahmad **101519102**

Submitted to the Faculty of Electrical Engineering

Department of University of Management and Technology Lahore

for the fulfillment of the requirements for the Degree of

Bachelors of Science in Electrical Engineering

Projects Director

Panel Teachers

School of Engineering

University of Management and Technology

Declaration

We declare that this thesis was composed without plagiarism and work contained here is our own basic theory that we studied from literature and adapted it in our own words with references and this work has not been submitted for any other degree or professional qualification.

Project Advisor

Mr. Waseem Iqbal

_____

Members

M.Omar Safdar

_____

Maaz Bin Tufail

_____

Awais Ahmad

_____

Acknowledgements

Thanks to Almighty Allah who gave us strength to make a decision to choose the project topic for our final year project and gave us strength to work on this project by utilizing all our abilities, skills and power. He has given us the knowledge to choose the path that can be a guide way to do something for mankind. This project is compilation of long period of work and without the support of many individuals it would never have been possible to complete. First and foremost we thank our families for their care and endless support both moral and financial and their belief in us that we can achieve what we are going for.

We have set a light and ever burning flame of gratitude and deep sense of obligation to our honorable advisor Mr. Waseem Iqbal & Mr. Hussian Ahmad Raza for his generous assistance and inspiring attitude during the course of our project. We also thank him for his extreme co-operation and encouraging attitude during this project. Not only he helped us in our project but also did his best efforts in familiarizing us with basic concepts of components used which proved to be very useful and helpful during completion of our project.

Abstract

The core of an electric power system is the generation. An alternative arrangement for power source is a must and generator fulfills it very well. Generators dependent upon steam, gas, diesel, water alternately wind turbines, and responding burning motors are all being used.The main objective of this project is to make a Control System that will protect the generator from faults like Over Current, Over/Under Voltage, Frequency, Phase sequence. If any one of the faults occurs the generator protection system will prevent it from damaging. A numeric relay will incorporate all protections into one design.

The work of Protective relay is sensing and controlling devices to accomplish its capability. When power system is normal, then protective relay leftovers inactive and serves no vigorous role. When fault occur then the Relay operated and work properly.

Table of Contents

Table of Figures