

DEVELOPMENT OF A HIGH VOLTAGE GENERATOR, LOAD AND VOLTAGE MEASUREMENT

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Session 2013-2017

A Report is submitted to the Department of Electrical Engineering,
Bahria University, Islamabad.

In partial fulfillment of requirement for the degree of BS (EE)

Certificate

We accept the work contained in this report as a confirmation to the required standard for the partial fulfillment of the degree of BS (EE)

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Dedication

I would like to dedicate this work to my family.

Acknowledgements

First of Allah we are thankful to Allah almighty, who gave us power and courage to complete this project. After that we are thankful to our parents and family who always supported us and remembered us in prayers. Special role is played by our teachers who always helped us all the time and supported us. Special thanks to our respected supervisor Engr. Mudasir Wahab, who helped us in every stage of difficulty. Special thanks to Engr. Dr. Asad Waqar who helped us and coordinated with us.

Abstract

Voltage generation using transformers is common. Such system has been made but less efficient as compared to purposed system. The purposed system has additional features. There are two way to get low voltage and high voltage using transformers. First one is step up process and second one is step down process. In step up process the secondary winding of transformer has more turns then primary windings while in step down transformer the number of primary winding is more than the secondary. Here the step-up voltage process will be used. The centered taped transformer is given one input and two outputs. The input is conventional 220V ac while the outputs are 220V ac and 850V. The central taped transformer is that in which there are two individual voltage outputs in secondary winding. Usually high voltage generation using transformer is rare due to expensive components and lack of pure material as well in Pakistan. Such trainers are made for laboratory purposes where the high voltage trainers are used for testing the insulators at high voltages and many other purposes. High voltage generators are currently found in UETs, COMSATS and BAHRIA University will be the third one where such high voltage generator will be found. To measure this high voltage a special type of voltage meter has been designed which will measure voltage up to 2.5 KV. This measuring meter is basically designed using capacitor bank instead of resistors. Capacitor will drop the voltage in to 12 equal part which will make easy to measure voltage. The capacitors has been aligned in series.

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