PROJECT PROPOSAL SEMINAR

PROJECT TOPIC: DESIGN AND CONSTRUCTION OF A TRANSFORMER TRAINER

BY

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SUPERVISED BY:

ENGR. T.K. SULE

PRESENTED TO:

DEPARTMENT OF ELECTRICAL & ELECTRONIC ENGINEERING
INSTITUTE OF TECHNOLOGY
KWARA STATE POLYTECHNIC, ILORIN

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PRESENTATION OUTLINE

- INTRODUCTION
- STATEMENT OF THE PROBLEM
- AIM OF THE PROJECT
- OBJECTIVES OF THE PROJECT
- METHODOLOGY
- DIAGRAM OF A TRANSFORMER TRAINER

1.1 INTRODUCTION

- Engineering students with less practical knowledge, often find it difficult to cope with the industrial environment after graduation. As a technologist, it is highly necessary to pursue practical training of what you are learning in the theoretical class.
- Hence, there is need of the inclusion of more practical learning in tertiary institutions, to help students gain job experiences that are needed for employment.
- A transformer trainer is a self contained set of Electrical circuits that can be interlinked by students to create a multifunctional trainer instructional aid to demonstrate connection & accurately measure electrical parameters

2. STATEMENT OF THE PROBLEM

There is need for practical experience to consolidate the theoretical knowledge gained in class. These problems have given rise to the need for more trainers in the department's laboratory to help bridge the gap between theory and practice alongside ensuring that every student can actively participate during practical session.

3. AIM OF THE PROJECT

- To design and construct a transformer trainer

4. OBJECTIVES OF THE PROJECT

- To develop a reliable transformer trainer that facilitates a range of experiments on transformer principles, characteristics, and testing.
- To construct a multifunctional energy meter module to accurately measure electrical parameters
- To design and construct a device that can perform experiments on:
  - ✔ short circuit test to determine the loss of the transformer
  - ✔ open circuit test to determine the iron loss of the transformer
  - ✔ polarity test to determine the direction of current flow
  - ✔ on-load test to evaluate a transformer performance under working conditions by connecting a load to its secondary side

5. METHODOLOGY

The project work will involve the following stages:

- Input parameter (Meter)
- Input power
- Watt meter interface
- Test transformer:
- Output power
- Output parameter feedback (Meter)
- Transformer interface

ieved should be highlighted one after the other and in order of the stated objectives

DIAGRAM OF A TRANSFORMER TRAINER