

## **CHAPTER FIVE**

### **CONCLUSION AND RECOMMENDATION**

#### **5.1 Conclusion**

The single-phase transformer trainer was successfully designed and constructed, meeting the specified aim and objectives of the project. The single-phase transformer trainer enables experiments such as open circuit tests to measure core losses, short circuit tests to determine copper losses, and load tests to evaluate efficiency and voltage regulation. Additional experiments include transformation ratio tests, polarity tests, and efficiency calculations under various load conditions, providing hands-on experience with transformer operation and performance.

Finally, the project demonstrates the importance of transformers in electrical power systems and provides a valuable learning tool for students.

#### **5.2 Recommendation**

Future projects could focus on designing and constructing three-phase transformer trainers or transformers with different ratings and specifications by incorporating additional features such as temperature monitoring, overcurrent protection, and digital displays for easier data collection.

In addition, future projects could also explore designing transformers with different ratings, configurations, or materials to expand the scope of experimentation and learning. Moreover, integrating the trainer with data acquisition systems or simulation software could provide more comprehensive insights into transformer performance and behavior.

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