

# **IMPACT STUDY OF SINGLE PHASING OF INDUCTION MOTOR**

**A Project Report**  
**submitted in partial fulfillment of the requirements for the Award of the Degree**  
**of Bachelor of Engineering in Electrical & Electronics Engineering**  
**of the Visvesvaraya Technological University, Belgaum**

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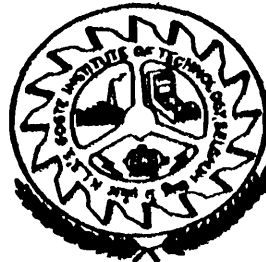
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## **ABSTRACT**

An analytical evaluation for performance characteristics of a three phase induction motor fed from a single phase supply is studied. A special emphasis is placed on single phasing of induction motor with capacitor connected. It is seen that farmers in rural area to avoid the shut down of their irrigation pumps due to single phase supply, go for single phasing of induction motor with capacitor connected. It has been leading to the unbalanced operation of power grid. For this work, symmetrical component approach has been used to evaluate analytically the performance characteristics under various conditions. The performance characteristics, thus obtained through analytical results are verified through the results obtained through laboratory experiments. It has been concluded that single phasing leads to undesirable operation of induction motor causing overheating, shaft vibration, noise, derating and additional losses, and hence reduce its lifetime and performance.