A

MINI PROJECT REPORT

on

LASER BASED BORDER SECURITY SYSTEM

Submitted in partial fulfilment of the Requirements for the award of

Degree

of

Bachelor of Technology

in

ELECTRONICS &COMMUNICATION ENGINEERING

By

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under the esteemed guidance

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(Accredited by National Board of Accreditation)

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2024-2025

CERTIFICATE

This is to certify that the work which is being presented in the B. Tech. Mini Project Report entitled **"LASER BASED BORDER SECURITY SYSTEM"** being submitted by **JAKKULA SRUJANA (22681A0427)** impartial fulfillment of the requirements for the award of the Bachelor of Technology in **"Electronics & Communication Engineering"** and submitted to the Department of Electronics & Communication Engineering of Christu Jyothi Institute of Technology and Science, Jangaon.

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- Organize trainings and activities towards Overall personality development in time with industrial need.
- Promote innovation towards sustainable solutions with multi discipline team work with ethics.

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I here by declare that the project entitled—**"LASER BASED BORDER SECURITY SYSTEM",** which us being submitted as Mini Project in Electronics and Communication Engineering to Christu Jyothi Institute of Technology & Science, is an authentic record of our genuine work done under the guidance of K.Chiranjeevi, Assistant Professor of ECE Dept.

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ABSTRACT

The laser-based border security system is an advanced surveillance technology designed to detect and prevent unauthorized crossings along secured perimeters. This system utilizes strategically placed laser emitters and receivers to form an invisible barrier, which, when disrupted, triggers real-time alerts and activates surveillance mechanisms. The key components include laser sensors, surveillance cameras, an alarm system, and an integrated control system, ensuring comprehensive monitoring. This technology offers high accuracy, low maintenance, and effective operation in diverse environmental conditions. It is widely applicable in securing international borders, military zones, and high-security installations. By providing an automated and immediate response to potential intrusions, the laser-based border security system significantly enhances national security and border management.

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