

**INVERTIS UNIVERSITY,  
NH-24, BAREILLY-243123, UTTAR PRADESH.**

**COMPLETION CERTIFICATE**

Date; 11<sup>th</sup> November 2019

1. **Title of the Project:** Design, Fabrication, and Testing of a Novel Anti-collision System for Locomotives.
2. **Name of the Principal Investigator:** Prof. P.P. Singh
3. **Department:** Applied Sciences and Humanities


**Details of Expenditure:**

S. No.	Items Procured	Total Expenditure in INR
1.	Infrared Transmitter	5538.00
2.	Infrared Receiver	4596.00
3.	Tools and packages for data analysis	68558.00
3.	Vital Computer system with the following operations: (a) To interface with signalling inputs in fail-safe manner. (b) Ethernet port and GSM interfaces for connectivity with network management system. (c) Interface with Video Display Unit (VDU) to show real time display of Loco movements. (d) USB interface for downloading of log and other types of data.	192500.00
4.	Travel and Conferences	24550.00
<b>Grand Total</b>		<b>295742.00</b>


**HOD Remarks:**

Reviewed

(Signature)  
Principal Investigator

  
Dean  
Research and Development  
Invertis University, Bareilly

(Signature)  
HOD

  
Head  
Department of Applied Science  
Invertis University, Bareilly (U.P.)