

***NOTE: As directed by authorities, the laboratory or advanced research facility developed in the Department must be portrayed in the report with photographs.**

EXAMPLE: The Department of Electrical Engineering has developed a Power Quality Lab. Accordingly, the report should include:

1. Introduction of lab

This lab will introduce about the basic theory of harmonics and their effects on the power system. The experiments covered various issue related with power quality such as transient overvoltage's(surges/spikes), swells, flickers, unregulated voltages, voltage dips/sags, interruptions or waveform disturbances (harmonics, others).



2. Total Cost of research equipments:

14,80,605 (Fourteen lakh eighty thousand six hundred five)

3. Details of the equipments:

Drives and Shunt Active Filter

- a) 10hP Drive fed 7hP AC motor coupled with 3.7 kW Slip ring Induction Motor
Quantity-1, Rate: 1,95,000/-
- b) 10hP Drive fed 5hP AC motor coupled with 2.2 kW Self-excited Induction Motor
Quantity-1, Rate: 1,70,000/-
- c) 5 KVA 3 level Shunt Active Filter Trainer
Quantity-1, Rate: 5,00,000/-
- 3 Phase 5 Level Cascaded H Bridge Inverter/ Multilevel Inverter
Quantity-1, Rate: 4,08,870/-

4. Benefit to students/researchers:

Students get acquainted with various power quality issues and their effects by performing both simulations in MATLAB software and Hardware set up also.

**Dr. Shakuntla, Assistant Professor
PQ Lab In-Charge**