

Pandit Deendayal Petroleum University
School of Technology
Department of Electrical Engineering

B.Tech Project List

Academic Year: 2019-2020

Title of Projects:

- Smart meter monitoring and management
- Design a single phase inverter with selective harmonic elimination
- Study on high power factor converters for ev applications
- Design and development of solar PV based DC micro-grid
- Reactive Power Compensation of Single Phase Load using Thyristor Switched Capacitor
- The comparative analysis of various MPPT method for solar PV with conventional techniques or algorithms
- Dual axis solar tracker
- Comparative analysis of various controllers used in solar PV application for standalone DC system
- Comparative study of total harmonic distortion(THD) during grid interface of solar and wind power generation
- Transformer differential protection using principal component analysis
- Design and development of solar inverter
- UPFC based Power Factor Correction
- Simulation and performance analysis of high voltage transmission line
- Hardware realization of closed loop control of BLDC motor
- Critical comparison of different speed control techniques of permanent magnet brushless DC motor using MATLAB simulation

Academic Year: 2018-2019

Title of Projects:

- Smart Energy Metering with Current Status update through Data Analysis
- Energy conservation and Safety as a part of Energy Audit of an Educational Institute
- Design and Analysis of automatic power factor controller using Microcontroller
- Automatic Solar Tracker
- Design, Simulation & Fabrication of single phase UPS
- Design and Simulation of brushless DC Motor using PWM control technique
- Design and Implementation of Half bridge LLC Resonant Converter
- Modelling and Simulation of transformerless photovoltaic domestic system connected to grid

Academic Year: 2016-2017

Title of Projects:

- Implementation of Thyristor Switched Capacitor for Power Factor Improvement
- Four Quadrant Operation of DC motor
- Design and Analysis of Three-Phase Inverter for UPS Application
- DC-DC Converter
- Design and Development of Interleaved Buck Converter in a DC Micro-Grid.
- Discrete Liquid Level Control of Coupled Tank System: An Experimental Study.
- Development of Single-phase Shunt Active Power Filter
- Power Flow Control In a Single Phase Distribution System with Solid State Transformer
- Power System Static Security Assessment.
- Speed Control of BLDC Motor
- Optimal Generation and Scheduling of Power Using Genetic Algorithm
- Transient Stability
- Implementation of FACTS by using Thyristor Switched Reactor.
- Analysis of IEEE standard Bus System with Micro Grid.

Academic Year: 2014-2015

Title of Projects:

- Computer aided design and development of squirrel cage induction motor
- Modelling, simulation and design of impulse generator using Marx circuit
- Simulation of SVC to improve voltage profile in power system (IEEE 57 bus system)
- Computer aided design of transmission line
- 3 HP three phase induction motor protection against single phasing; over and under voltage conditions.
- Study, construction, simulation and analysis of capability charts for power system components
- Design of elevator control system using PLC (working module)
- The design and development of Quad-copter
- Design of over-current and earth fault relay
- Design of 220 kV transmission substation
- Power theft detection on the distribution side
- Condition assessment of transformer using dissolved gas analysis (DGA)
- Energy management and energy audit of an industry
- Hardware implementation of maximum power point tracking in solar panel using DSP/Microcontroller
- Speed control of medium torque stepper motor
- Automatic car parking system using PLC based sequential switching system
- Design and development of automatic power factor correction (APFC) panel
- Speed Control of DC motor by using PWM

- Contact less electric vehicle charging system using Inductive charging
- Reactive power compensation and automatic power factor improvement of an induction motor
- The demonstration and practical applications of wireless power transfer systems
- Electrical power generation and storage using foot step method