Jagdamba Education Society's

S.N.D College of Engineering & Research Centre, Yeola Babhulgaon

Department of Electrical Engineering

(2021-2022)

Project List

Sr.No.	Group No.	Name of Students	Name of Guide	Title of Project	Types of Project
1	BE-1	Abhay Ananda Salve Tammana Shabbir Shaikh Saundane Aarati Balasaheb	Dr. Tapre P. C.	Auto Reclosure System Using Air Break Switch.	Application Based
2	BE-2	Kurhe Sakshi Parashram Pooja Parashram Kurhe Dabhade Vrushali Dnyaneshwar	Prof. Choube Shyam	Automatic Crack in Track & obstacle detection in railway	Application Based
3	BE-3	Beldar Shamal Rajendra Agwan Prajakta Chandrakant Kate Swati Balu	Dr. Tapre P. C.	Solar Based Electric Vehicle Smart Charging Station	Application Based
4	BE-4	Abhishekh Pandurang Pawar Vaibhav Dilipsing Girase Sanket Bapurao Suryavanshi	Prof. Phiske S. G.	IoT Based Smart Robot	Application Based
5	BE-5	Mahesh Turakane Abak Yogesh Zond Vyankatesh	Prof. Hadpe N. V.	Predicting Battery Degradation by Using Trinket MO & Python Algorithm	Application Based
6	BE-6	Bhamare Nikhil Dinkar Pardeshi Darshan Dharamsing Nandare Jayesh Devendra	Prof. Hadpe N. V.	Automated Foot Bridge For Railway Station	Application Based
7	BE-7	Deore Rakesh Trambak Shejwal Jayashri S. Dipika Ahire	Prof. Shejwal C. K.	Energy Management System Based on Counter, Light Intensity & Temprature Sensor	Application Based
8	BE-8	Rohit Rajendra Dhawale Prasad Tarade Majahar Patel	Prof. Phiske S. G.	Electromagnetic Satellite Launcher	Application Based
9	BE-9	Mahale Govind Yashvant Mule Akash Dattatray Chaure Anil Narayan	Prof. Bhangale H. K.	Transformer Protection System By Using GSM	Application Based
10	BE-10	Wakchaure Amit Rajendra Gund Amol Sahebrao Manoj Shantaram Bachhav	Prof. Shejwal C. K.	Roof Wind Ventilator Electricity Generation	Application Based
11	BE-11	Nikam Shailesh Sudam Shevate Shubham Ghanshyam Bhadake Vaibhav Dnyaneshwar	Prof. Bhangale H. K.	Three Phase Fault Analysis with Auto-Reset on Temparary & Permanent Trip otherwise.	Promblem Based
12	BE-12	Bakale Akshay Jivan Deore Mayur Vijay Kate Tushar Balu	Prof. Shejwal C. K.	Solar & Smart Energy System	Application Based
13	BE-13	Shinde Vishnu Namdeo Darekar Sujit Shantaram Deokar Ganesh Niwrutti	Prof. Solanki A. M.	Smart Car Parking System Using Aurdino	Application Based
14	BE-14	Nilesh Jadhav Sagar Gadiwan Sagar Lawate	Prof. Choube S. H.	Electrical Energy Generation Using Exhaust	Application Based
15	BE-15	Pawar Malati Ramlal Komal Ramdas Ugale Zalte Anushka Arun	Dr. Tapre P. C.	Smart Gas Leakage Detection System Using IoT	Promblem Based
16	BE-16	Wakchaure Gaurav Pawar Prashant Pawar Sachin	Prof. Hadpe N. V.	Automatic Railway Track Fault Detection Using Wireless Network System	Promblem Based
17	BE-17	Mundhe Swati Shankar Borkade Aishwarya Arun Borse Tejal Suresh	Prof. Phiske S. G.	Power Factor Controlling Using Micro-Controller	Promblem Based
18	BE-18	Hembade Adesh S. Shelar Yash Bhimraj Kiran Raman Mahale	Prof. Muthha N. D.	IoT Based Smart Grid	Promblem Based

19	BE-19	Khokale Dnyaneshwar Vithhal Wagh Vrushali Ambadas Khokale Apeksha Namdeo Shejwal Ankita Ashok	Prof. Solanki A. M.	Street Light Intensity Control	Application Based
20	BE-20	Shubham Randhavane Satish S. Singar Shubham B. Borbane	Prof. Shejwal C. K.	Solar Based EV Charging Station	Application Based
21	BE-21	Darade Pawan Sunil Bedade Avinash Rajendra Bhabad Amol Balu	Prof. Solanki A. M.	One Sun One World One Grid	Application Based
22	BE-22	Shamal Kailas Thombare Revati Subhash Barde Gayatri D. Deshmukh	Prof. Hadpe N. V.	Multi-Purpose Cleaning Robot	Application Based
23	BE-23	Maske Vishal Vijay Thorat Shubham Chandrakant Chavhan Jyoti D.	Prof. Shejwal C. K.	Auruino Based Accident Prevention System Using Eye Blink Sensor.	Application Based
24	BE-24	Shaikh Zinat Jamir Waghchaure Pratiksha Babasaheb Ravate Hrushikesh Suresh	Dr. Tapre P. C.	Protection of Three Phase Induction Motor from Over Single Phasing over Heating & Over Speeding.	Application Based
25	BE-25	Rajashri K. Kurhade Sonali A. Sonawane Shital M. Bhalerao	Prof. Choube S.	Transformer Health Monitoring Using IoT	Application Based
26	BE-26	Rushikesh Purshottam Sonawane Gokul Appa Sawant Anil Kamodkar	Prof. Bhangale H. K.	IoT Based Smart Energy Meter Monitoring with Theft Detection System	Application Based
27	BE-27	Sangale Pooja Nanasaheb Rutuja Anil Salve Harshvardhan S. Londhe	Dr. Tapre P. C.	IoT Based Three Phase Power Failure Monitoring with SMS Alets	Application Based
28	BE-28	Kardile Akshay Subhash Gaikwad Sagar Bhaskar Varpe Suraj Sanjay	Prof. Solanki A. M.	Electronic Shopping Cart With Auto Billing & Using RFID	Application Based
29	BE-29	Tambe Rahul Sonawane Umesh Rasal Gita	Prof. Phiske S. G.	Underground Cable Fault Detection System	Application Based
30	BE-30	Suralkar Sagar Bhimraj Shubham Dattaram Ghag Dhaneshwar Pankaj D.	Prof. Solanki A. M.	Androit Control Fire Fighting Robot	Application Based
31	BE-31	Nagare Sachin Vijay Salave Sumit Sanjay Wani Jagdish Prashant	Prof. Solanki A. M.	Automatic Liquid Filling Machine	Application Based
32	BE-32	Shubham Suresh Shihare Sidhharth Baburao Kedare Aher Umesh Anil	Prof. Hadpe N. V	RPFC Charging Station Development for Electric Vehicle	Application Based
33	BE-33	Kale Mohit Prakash Bothe Rushikesh Sunil Pawar Santosh Bansi	Prof. Mutha N.	Design & Development of Micro Phasor Measurement Unit	Application Based

Project Co-ordinator
(Prof. S.G. Phiske)

HOD
(Dr. P.C. Tapre)

Head
Department Of Electrical Engg
SND College of Engg.& Rc,Yeola

Jagdamba Education Society's
SND COLLEGE OF ENGINEERING AND RESEARCH CENTRE, YEOLA
Department of Electrical Engineering

Date: 05/07/2021

NOTICE

All staff member of Electrical Department is here by inform to conduct practical of SE, TE and BE student online. All can make use of virtual Lab of IIT, NIT and COEP for some practical of syllabus.

All should maintain the record of same.

All subject teacher kindly follows and provide the feedback for same.

HOD Electrical

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NOTICE

All the student of Electrical Department are here by informed to attend the practical of respective subject online. Subject inchrges will use Virtual Lab for practical demonstration. So, all should attend the compulsory.

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List of Subject Using Virtual Lab for Experiential Learning
A. Y. 2021-2022

Sr. No.	Name of Subject	Name of College (IIT/NIT/COEP)	Website Link
01	High Voltage Engineering	IIT KHARGPUR	http://vlabs.iitkgp.ac.in/vhv/#
02	Electrical Machines-I	IIT ROORKEE	https://ems-iitr.vlabs.ac.in/List%20of%20experiments.html
03	Electrical Machines-II	DAYALBAGH	https://vp-dei.vlabs.ac.in/Dreamweaver/list.html
04	PLC Applications	NITK SURATHKAL	http://ied-nitk.vlabs.ac.in/List%20of%20experiments.html
05	PLC &SCADA Applications	COE PUNE	http://ial-coep.vlabs.ac.in/List%20of%20experiments.html
06	Electrical Machines	COE PUNE	http://em-coep.vlabs.ac.in/List%20of%20experiments.html
07	Electrical Machines (IITG) Lab	IIT GUWAHATI	http://vem-iitg.vlabs.ac.in/index.html
08	PLC &SCADA Applications	COE PUNE	http://plc-coep.vlabs.ac.in/List%20of%20experiments.html
09	Analog& Digital Electronics	IIT ROORKEE	https://ae-iitr.vlabs.ac.in/List%20of%20experiments.html
10	Analog& Digital Electronics	IIT KHARGPUR	http://vlabs.iitkgp.ac.in/rtes/#

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Subject-wise list of Experiments available in Virtual Laboratory
A.Y. 2021-2022

1. High Voltage Engineering

2. Study Of Impulse Voltage Generator
3. Parametric Analysis of Impulse Voltage Waveform
4. Study of Impulse Current Generator
5. Parametric Analysis of Impulse Current Waveform
6. Critical Flashover of a Sphere Gap using IVG
7. Study of Rectangular Pulse Current Generator
8. Functioning of Voltage Doubler
9. 3-Stage Cockroft Walton Voltage Multiplier

2. Electrical Machines-I

1. Familiarization of the electrical machine laboratory apparatus
2. To study the Load Characteristics of DC shunt generator
3. Speed Control of DC motor by field resistance control
4. Speed Control of DC motor by armature resistance control
5. To perform speed control of DC motor by using Ward- Leonard Method of speed control
6. Determination of Transformer equivalent circuit from Open Circuit and Short Circuit Test
7. To study Magnetization Characteristics of DC shunt generator
8. Speed control of slipring Induction Motor

3. Electrical Machines-II

1. To study the Synchronization of alternator with infinite bus bar.
2. To determine the direct axis reactance (Xd) and quadrature axis reactance (Xq) of synchronous machine.
3. To determine positive sequence, negative sequence and zero sequence reactances of an alternator.
4. To measure the dielectric Strength of transformer oil.

5. To Study the effect of different shape of electrodes on dielectric (air) breakdown.
6. To Study the gas actuated Buchholz relay for oil filled transformer.
7. To Study the over-current relay and the effect of PSM and TSM.
8. To determine the sub-transient (xd″), transient (xd′) and steady state reactance (xd) of a synchronous machine.
9. To Study the Ferranti Effect of a transmission line/cable.
10. To study the differential Protection of a three phase delta-delta connected transformer.
11. To study the Protection of a three phase Induction Motor using Numerical Relay.

4. PLC Applications

- Introduction to PLC and Introduction to digital I/O interface to PLC
- Introduction to ladder logic
- PLC Timer Instruction
  1. PLC On-Delay Timer Instruction
  2. PLC Off-Delay Timer Instruction
  3. PLC Retentive Timer On Instruction
- PLC Counter Instruction
  1. PLC Count-Up instruction
  2. PLC Count-Down instruction
- Application of PLC
  1. Garage Shutter Opening and Closing Using PLC
  2. Container Filling Process Using PLC
  3. Simultaneous output interlock using PLC
  4. Maximum Simultaneous Operations Limiter using PLC
  5. Motor forward and reverse direction control using PLC

5.PLC & SCADA Applications

1. Study hardware and software platforms for DCS
2. Simulate analog and digital function blocks
3. Study, understand and perform experiments on timers and counters
4. Logic implementation for traffic Control Application
5. Logic implementation for Bottle Filling Application
6. Tune PID controller for heat exchanger using DCS
7. FBD for autoclavable laboratory fermenter

8. Develop graphical user interface for the fermenter plant

6.Electrical Machines Lab

1. Load Test On Separately Excited DC Motor
2. Speed Control of Separately Excited DC Motor
3. No Load Test on Three Phase Induction Motor
4. Blocked Rotor Test on Three Phase Induction Motor
5. Open Circuit Test on Three Phase Alternator
6. Short Circuit Test on Three Phase Alternator
7. Load Test on Three Phase Alternator
8. V and Inverted V curves of Synchronous Motor

7.Programmable Logic Controller

1. Study hardware and software used in PLC
2. Implementation Logic Gates
3. Implementation Of DOL Starter
4. Implementation Of On-Delay Timer
5. Implementation Of Off-Delay Timer
6. Implementation Of Up-Down Counter
7. Implementation Of PLC Arithmetic Instructions
8. Implementation Of PID Controller

9. Analog & Digital Electronics

1. Log and antilog amplifiers
2. Voltage comparator
3. Wien bridge oscillator using operational amplifier
4. Voltage regulator using operational amplifier to produce output of 12V with maximum load current of 50mA
5. Voltage to current converters
6. Function generator using operational amplifier (sine, triangular & square wave)
7. Astable and monostable multivibrator using IC 555

10. Analog & Digital Electronics

1. DF-Part1: Digital FIR filter design and simulation
2. DF-Part2: Fixed point Implementation of Digital FIR Filter
3. DF-Part3: MCU-DAC interfacing and generation of ramp wave
4. DF-Part4: Interfacing of ADC and data trasnfer by software polling, study of aliasing
5. DF-Part5: ADC triggering through timer(On Chip Timer)
6. DF-Part6: Interrupt driven data transfer from ADC
7. DF-Part7 Implementation of Digital FIR Filter on 8051 Microcontroller
8. SM-Part1: LCD - MCU interfacing and displaying a string
9. SM-Part2 Keyboard-MCU interfacing take a input from keypad and display on LCD
10. SM-Part3: Stepper Motor Control Using ATMEGA-16 Microcontroller
11. HN-Part1: Interface a LED matrix and display a number on the matrix.
12. HN-Part2: Interfacing 4x4 switch matrix with the microcontroller
13. HN-Part3: Implementation of Hopfield network in C to recognize a simple ASCII character.
14. HN-Part4: Implementation of Hopfield Network on ATMEGA-16 microcontroller
15. SC: Serial Communication between micro controller and PC
16. TC: Temperature control using ATmega16

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