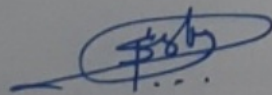




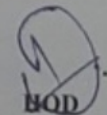
*Jagdamba Education Society's*  
**S.N.D College of Engineering & Research Centre, Yeola Bahulgaon**  
**Department of Electrical Engineering**  
**(2021-2022)**  
**Project List**

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

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



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



(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: 05/07/2020

## 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.

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SND COLLEGE OF ENGINEERING AND RESEARCH CENTRE, YEOLA  
Department of Electrical Engineering

Date: 05/07/2021

## NOTICE

All the student of Electrical Department are here by informed to attend the practical of respective subject online. Subject inchrgees 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	<a href="http://vlabs.iitkgp.ac.in/vhv/#">http://vlabs.iitkgp.ac.in/vhv/#</a>
02	Electrical Machines-I	IIT ROORKEE	<a href="https://ems-iitr.vlabs.ac.in/List%20of%20experiments.html">https://ems-iitr.vlabs.ac.in/List%20of%20experiments.html</a>
03	Electrical Machines-II	DAYALBAGH	<a href="https://vp-dei.vlabs.ac.in/Dreamweaver/list.html">https://vp-dei.vlabs.ac.in/Dreamweaver/list.html</a>
04	PLC Applications	NITK SURATHKAL	<a href="http://ied-nitk.vlabs.ac.in/List%20of%20experiments.html">http://ied-nitk.vlabs.ac.in/List%20of%20experiments.html</a>
05	PLC & SCADA Applications	COE PUNE	<a href="http://ial-coep.vlabs.ac.in/List%20of%20experiments.html">http://ial-coep.vlabs.ac.in/List%20of%20experiments.html</a>
06	Electrical Machines	COE PUNE	<a href="http://em-coep.vlabs.ac.in/List%20of%20experiments.html">http://em-coep.vlabs.ac.in/List%20of%20experiments.html</a>
07	Electrical Machines (IITG) Lab	IIT GUWAHATI	<a href="http://vem-iitg.vlabs.ac.in/index.html">http://vem-iitg.vlabs.ac.in/index.html</a>
08	PLC & SCADA Applications	COE PUNE	<a href="http://plc-coep.vlabs.ac.in/List%20of%20experiments.html">http://plc-coep.vlabs.ac.in/List%20of%20experiments.html</a>
09	Analog & Digital Electronics	IIT ROORKEE	<a href="https://ae-iitr.vlabs.ac.in/List%20of%20experiments.html">https://ae-iitr.vlabs.ac.in/List%20of%20experiments.html</a>
10	Analog & Digital Electronics	IIT KHARGPUR	<a href="http://vlabs.iitkgp.ac.in/rtes/#">http://vlabs.iitkgp.ac.in/rtes/#</a>

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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 ( $X_d$ ) and quadrature axis reactance ( $X_q$ ) 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.



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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 ( $x_d''$ ), transient ( $x_d'$ ) and steady state reactance ( $x_d$ ) 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





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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

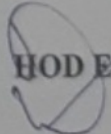




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**10. Analog & Digital Electronics**

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 transfer 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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