

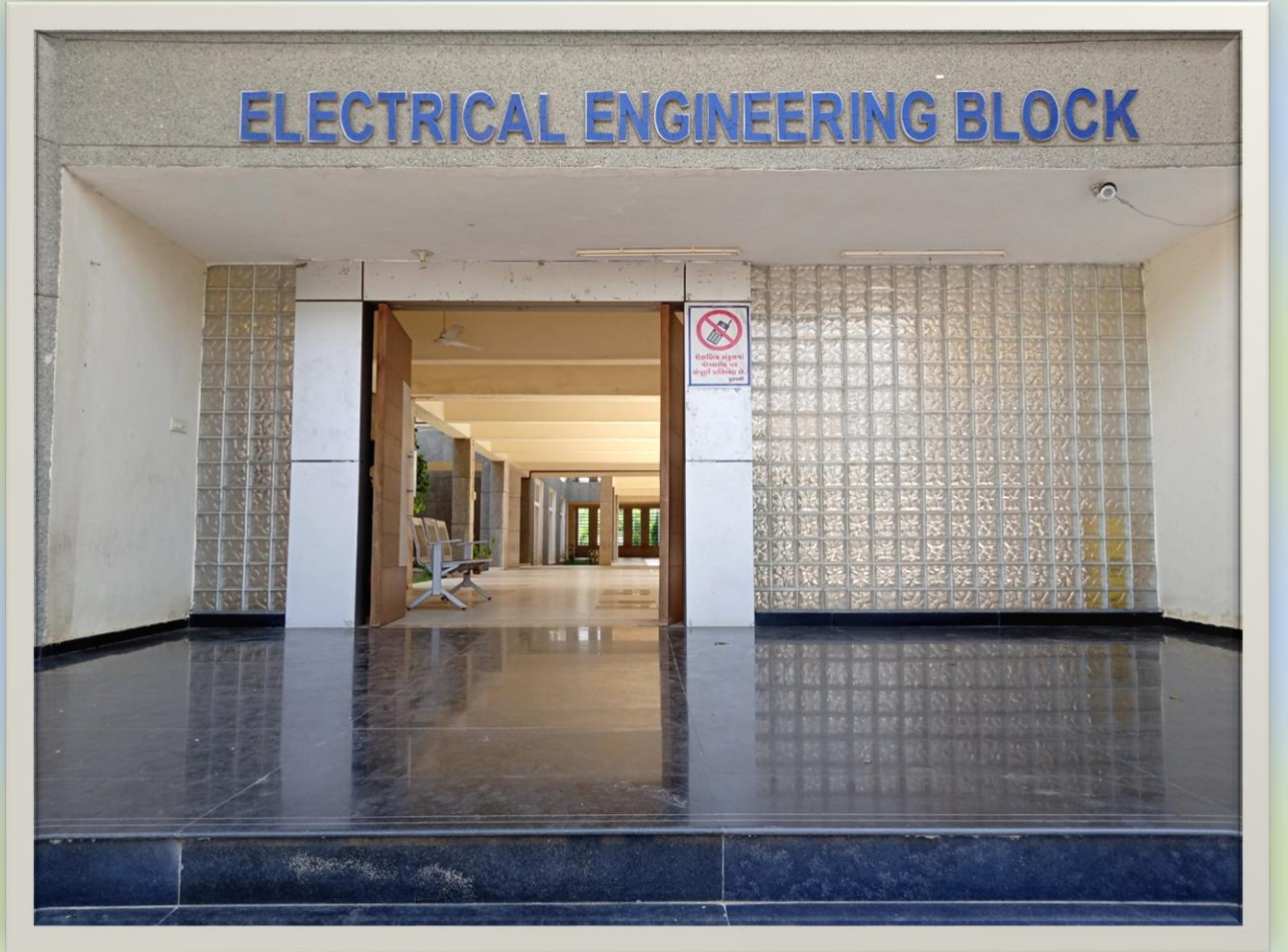
# Elect at Glance

E- NEWS LETTER

HALF YEARLY MAGAZINE

January-June - 2021

ELECTRICAL ENGINEERING DEPARTMENT  
GOVERNMENT ENGINEERING COLLEGE PALANPUR



Government of Gujarat

**GOVERNMENT ENGINEERING COLLEGE PALANPUR**

JAGANA, PALANPUR-AHMEDBAD HIGHWAY, PALANPUR - 385011, GUJARAT, INDIA

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## Index

1. Vision and Mission of Institute
2. From the Desk of Head of Department
3. Innovation in Teaching Learning
4. Major projects
5. Best Three Major projects
6. Result Analysis
7. Topper of Summer 2020 GTU Exam
8. Training attended by Student
9. Faculty Training
10. Expert Talk
11. Department Faculty

### **Newsletter Committee**

Prof. B R Patel,  
Prof. M G Prajapati,

### **Contact us**

## **Electrical Engineering Department**

Government Engineering College, Palanpur  
Jagana, Palanpur-Ahmedabad highway,  
Palanpur – 385011,  
Gujarat, India

## Vision and Mission of Institute

### VISION

"To be a leading technical institute facilitating transformation of human resources into socially responsible engineering professionals for sustainable development"

### MISSION

- (1) To achieve academic excellence by developing state-of-the-art laboratories and academic infrastructure.
- (2) To create an ecosystem that promote value based technical education, innovation and entrepreneurship for sustainable development.
- (3) To contribute to industry and society by providing technical and consultancy services.
- (4) To enhance technical competencies of human resources by providing need base trainings and quality improvement programs.

## Vision and Mission of Department

### VISION

"To develop competent electrical professionals for providing sustainable engineering solutions to society"

### MISSION

- (1) To impart quality technical education with professional skills and human values.
- (2) To provide an eco-system that inculcates technical competencies for sustainable development.
- (3) To mentor students in pursuit of professional carrier and entrepreneurship.

## From the Desk of Head of Department

It's my honor to welcome you to the Department of Electrical Engineering and our great community of intellectual. The department of electrical engineering was established in 2009 along with the inception of the institute and is affiliated to the Gujarat technological university, Ahmedabad. The department is well equipped with all major laboratories like basic electrical engineering lab, electrical machine lab, control laboratory and others. We are a team of 8 highly qualified, dedicated and experienced faculty members who encourage the students to develop problem solving skills and research attitude.



The faculties of electrical department are actively engaged with colleagues in taking pivotal technical problems of society. We not only teach regular curriculum to the students, but also mentoring them regularly. Being a head of department i except each in his or her path should be a leader. The department has been blessed with many good students since its inception. Many of them are serving at good position in the industries and government sectors. Some of our students have preferred higher studies in the reputed Indian/foreign universities. We regularly arrange an industrial visit for our students to explore their practical skills. Our department is committed for providing excellence in classroom infrastructure, enrichment of the academic and professional experience of students, outreach to the engineering community and society, and advancement in electrical engineering. We are trying our best to transform the knowledge, wisdom, confidence, responsibilities, optimism, motivation, persistence, strong work ethic, self-advocacy, and awareness to our students.

## Innovative Practice in Teaching-learning/Assessment Process

Sr. No.	Methodology	Subject	Class	Name of staff
1	Online Teaching through Team Microsoft/Progressive Assessment	BE, PE and EMAT	2 <sup>nd</sup> , 4 <sup>th</sup> , and 6 <sup>th</sup> Semester Classes	Prof. B. R. Patel
2	Online teaching with graphics tablet/ Progressive Assessment	PS-I, WSE and PSPD	4 <sup>th</sup> , 6 <sup>th</sup> and 8 <sup>th</sup> Semester Classes	Dr. A. M. Patel
3	Rubrics based Evaluation	PS-I, WSE and PSPD	4 <sup>th</sup> , 6 <sup>th</sup> and 8 <sup>th</sup> Semester Classes	Dr. A. M. Patel
4	Online Teaching through Team Microsoft/Progressive Assessment	BEE, EM, WSE and ED	1 <sup>st</sup> , 4 <sup>th</sup> , 6 <sup>th</sup> and 6 <sup>th</sup> Semester Classes	Prof H. N. Chaudhari
5	Online Teaching through Team Microsoft/Progressive Assessment	PE, ED and EMAT	4 <sup>th</sup> , 6 <sup>th</sup> and 6 <sup>th</sup> Semester Classes.	Prof. H. V. Hirvaniya
6	Project Bases Learning	MMI	6 <sup>th</sup> EE	Prof. H. V. Hirvaniya
7	Online teaching using MS white board/ Progressive Assessment	EMMI, EED and IPS	6 <sup>th</sup> Semester Classes	Prof. K. G. Prajapati
8	Online Teaching	BE, EM I and TCEE	2 <sup>nd</sup> , 4 <sup>th</sup> and 8 <sup>th</sup>	Prof. M. G. Prajapati

	through Team Microsoft/Progressive Assessment		Semester Classes	
9	Online Teaching through Team Microsoft/Progressive Assessment	MMI and PSOC	6 <sup>th</sup> and 8 <sup>th</sup> Semester Classes	Prof. M. K. Patel
10	Online Teaching through Team Microsoft/Progressive Assessment	PS-1, EMMI, PSOC	4 <sup>th</sup> , 6 <sup>th</sup> and 8 <sup>th</sup> Semester Classes	Prof. J. H. Patel

## Major projects

Sr. No.	Project Title	Name Of Guide
1	Modeling and Simulation of Short Transmission Line	Dr. A. M. Patel
2	Simulation of Single phase Supply to Three Phase Supply Converter	Prof. M. G. Prajapati
3	Solar Vehicle	Prof. H. V. Hirvaniya
4	Development of web based Portal and database management of students for an institute.	Prof. M. K. Patel
5	To simulate a lighting design using dialux	Prof H. N. Chaudhari
6	24-hour Simulation of a Vehicle-to-Grid (V2G) System Using Matlab	Dr. A. M. Patel
7	Load Flow and Short Circuit Analysis Using Power World Simulator	Prof. J. H. Patel
8	Design and simulation of bldc motor controller	Prof. H. V. Hirvaniya
9	Design and Simulation of Multilevel Inverter for Induction Motor Drive	Prof. M. G. Prajapati
10	Partial Shading of a PV Module Using Matlab	Prof H. N. Chaudhari
11	Design and Simulation of PWM Controlled Rectifier	Prof. B. R. Patel
12	MATLAB GUI Based hardware simulation of dc motor speed control analysis.	Prof. M. K. Patel

13	Speed Control of Brush-less DC motor	Prof. K. G. Prajapati
14	Relay Coordination of Over Current Relay using ETAP	Prof. J. H. Patel
15	Robotic Arm using Arduino	Prof. K. G. Prajapati

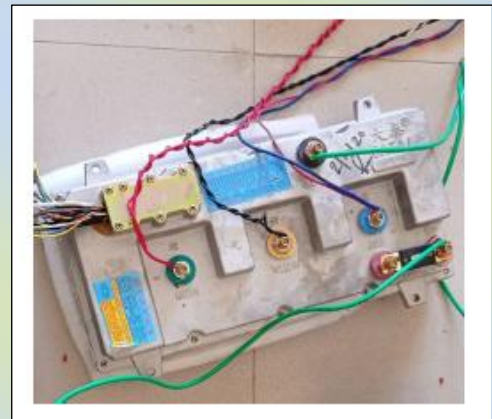
## Best Three Major projects

### Project: 01

**Title:** SOLAR VEHICLE

**Guide:** Prof. H. V. Hirvaniya

One of the front runners in the area of renewable energy resources today is solar power. Photovoltaic cells are used to convert solar energy in to useful electrical energy. The objective of this paper is to construct an efficient solar car, for the daily office commuters of the India so that they can travel a fixed distance that they need to commute everyday on a reliable and economical car that essentially runs on free renewable solar energy. All calculations would be made bearing in mind the maximum distance travelled by Indian office commuter i.e. from Home to Office since overcoming this distance would be the primary objective of the solar car to be built.



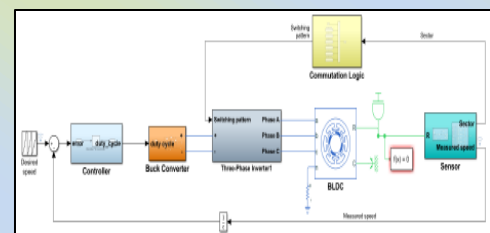
The Paper illustrates the calculation of the motor rating as well as battery calculations and the brief description about the work completed in SOLAR VEHICAL and the background of the solar car as well asthe problem associated with our Domain.

### Project: 02

**Title:** Design and simulation of bldc motor controller

**Guide:** Prof. H. V. Hirvaniya

Brushless DC Motor are used in variety of industrial application like traction drive, e-vehicle application, electronic industries etc. It has many merits over its demerits like higher efficiency, high starting and rotating torque, less noise, its compact design. All these factors play a vital role in the expansion of field of application of the motor. And as the controllers are required to control its work, understanding the necessity of the controller we are planning to work on the designing process of the controller for BLDC motor and analyse it. This report consist of data of task performed during the study of Design and Simulation of BLDC motor controller.

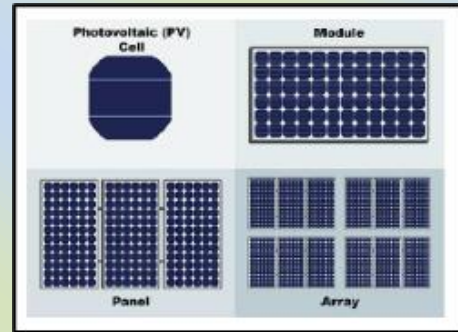


## Project: 03

**Title:** Partial Shading of a PV Module Using Matlab

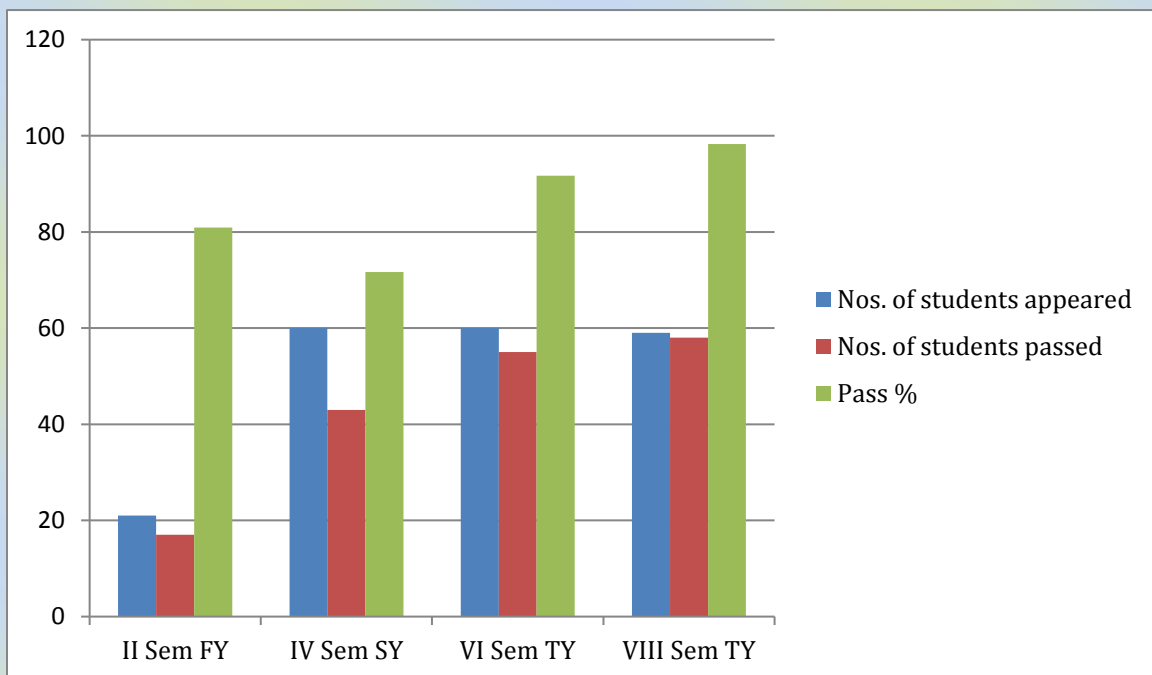
**Guide:** Prof H. N. Chaudhari

**Abstract:** This project presents the design and simulation of partial shading of PV module using MATLAB. Due to building, towers, dirt, passage of clouds PV modules get shadowed completely and partially. Modules in the array subjected to different levels of insulation. Due to shading of PV module current will decrease and result in mismatch in p-v and v-I characteristics and efficiency decrease. We are going to study this phenomenon using MATLAB.



## Result Analysis

Summer - 2021		Nos. of students appeared	Nos. of students passed	Pass %
FY	II Sem	21	17	80.95
SY	IV Sem	60	43	71.67
TY	VI Sem	60	55	91.67
LY	VIII Sem	59	58	98.31



## Topper of Summer 2020 GTU Exam

### Top Three of 2<sup>nd</sup> Semester

Sr. No	Enrollment No	Name	SPI
1	200610109001	AVINASH KUMAR	9.68
2	200610109004	PATEL JAYDEEPKUMAR MUKESHBHAI	9.05
3	200610109009	MENAT KRISHKUMAR SUDHIRBHAI	8.91

### Top Three of 4<sup>th</sup> Semester

Sr. No	Enrollment No	Name	SPI
1	190610109011	KUMAR HARSH	9.26
2	190610109008	JAGANIYA HITENDRAKUMAR VIRABHAI	8.65
3	190610109029	SHARMA PRERNA PRAMOD	8.61

### Top Three of 6<sup>th</sup> Semester

Sr. No	Enrollment No	Name	SPI
1	180610109054	SADHU RUCHI MANISHKUMAR	9.13
2	180610109062	VIRAMGAMI PRIYA SUDHIRKUMAR	9.13
3	190613109008	PATEL ASHISHKUMAR RAMESHBHAI	8.76
4	190613109021	YADAV NIRANJANKUMAR RAVINDRANATH	8.71

### Top Three of 8<sup>th</sup> Semester

Sr. No	Enrollment No	Name	SPI
1	170610109009	JOSHI JEET NAYANKUMAR	9.86
2	170610109010	JOSHI KESHAV SATYANARAYAN	9.86
3	170610109015	KUMAR SHUBHAM PRADEEP	9.69
4	170610109047	RATHOD SAGAR DEVIDAS	9.69
5	170610109061	VERMA RAVI PAVAN KUMAR	9.69
6	170610109053	SUTHAR KEYURKUMAR UPENDRABHAI	9.66

## Training attended by Student

Sr. No	Name of Student	Enrollment No	Name of Industry	Duration	
				From	To
1	Desai Dharmikkumar Devangkumar	180610109012	GETCO	02/06/21	16/06/21
2	Kugashiya Mahammadali Amirali	180610109021	Agariya Electrical Pvt. Ltd. Kanodar	28/05/21	15/06/21



Sr. No	Name of Student	Enrollment No	Name of Industry	Duration	
				From	To
3	Nair Rahuldev Muraleedharan	180610109032	Skyy Rider Institutions Pvt. Ltd.	01/06/21	14/06/21
4	Mevada Vinitkumar Jashavantbhai	180610109028	Tesla power industries	28/05/21	11/06/21
5	Panchal Pranay Kanaiyalal	190613109006	132 KV, Sub Station GETCO, Idar	03/06/21	16/06/21
6	Prajapati Sumitkumar Dilipbhai	180610109053	Hem Industries	01/06/21	16/06/21
7	Varan Mukesh Ishvarbhai	170610109060	220 KV, Sub Station GETCO Tharad	01/06/21	15/06/21
8	Patel Tejaskumar Bharatbhai	190613109011	Captain Pumps Private Limited, Palanpur	28/05/21	13/06/21
9	Jay Dipakkumar Modi	190613109005	Captain Pumps Private Limited, Palanpur	28/05/21	13/06/21
10	Patel Tirth Pravinbhai	180610109047	Gujarat Control System	28/05/21	14/06/21
11	Kuldipkumar Rasiklal Baleva	180613109001	GETCO	08/06/21	22/06/21
12	Omesh Babu	180610109002	Skyy Rider Institutions Pvt. Ltd.	01/06/21	14/06/21
13	Prremjiyani Hemex Suresh	190613109015	66 KV GSS Substation	25/05/21	16/06/21
14	Sindhi Muhammadabuzar Munirbhai	180610109055	H.H. Industries	28/05/21	11/06/21
15	Jitish Miteshbhai Adhvaryu	190613109001	220 KV, Sub Station GETCO Dudhrej	04/06/21	20/06/21
16	Viramgami Priya Sudhirkumar	180610109062	GETCO	01/06/21	15/06/21
17	Niranjankumar Ravindranath Yadav	190613109021	Saral Engineering Company	01/06/21	15/06/21
18	Priyansh Sureshkumar Nai	180610109031	Ganesh Panel Sales and Service	01/06/21	15/06/21

Sr. No	Name of Student	Enrollment No	Name of Industry	Duration	
				From	To
19	Parmar Krupali Bhupendrabhai	180610109038	220 KV, Sub Station GETCO Sadarpur	01/06/21	15/06/21
20	Prajapati Vasantkumar Khemabhai	190613109014	M.B.Powertech	31/05/21	15/06/21
21	Parth Kaushikkumar Miyawala	180610109029	Ami Bharat Electric Store	29/05/21	15/06/21
22	Patel Harshil Satish Kumar	180610109043	UGVCL Radhanpur	28/05/21	14/06/21
23	Gurjar Jilskumar Lalitkumar	180610109017	New Gujarat Sales & Service	28/05/21	13/06/21
24	Asari Mayank Chandubhai	180610109001	Topline Switchgear Pvt Ltd.	26/05/21	11/06/21
25	Chauhan Mahammadjuned I	180610109009	220 KV, Sub Station GETCO Tharad	01/06/21	15/06/21
26	Jethva Harshid Narsinhbhai	190613109003	GETCO	04/06/21	20/06/21
27	Panchal Bansari Kiritbhai	180610109035	220 KV, Sub Station GETCO Sadarpur	01/06/21	15/06/21
28	Makwana Rahul Kumar Jagdishbhai	180610109024	H.H. Industries	28/05/21	11/06/21
29	Vaghela Pradeepsinh Bharatsinh	180610109061	Doodhsagar Dairy	01/06/21	15/06/21
30	Patel Saurav Babubhai	180610109045	Ganesh Panel Sales and Service	01/06/21	15/06/21
31	Suthar Jaykumar Arvindbhai	180610109058	Narendra Transformer	01/06/21	14/06/21
32	Patel Jay Bharatbhai	190613109010	Captain Pumps Private Limited,	28/05/21	13/06/21
33	Menat Kuldip Jayantibhai	180610109027	UGVCL Palanpur Rural S/D under Division Office-1	01/06/21	15/06/21
34	Khatik Hiteshkumar Nandlal	190613109004	UGVC, Deesa Division 2	31/05/21	14/06/21
35	Soni Dharavkumar Hitendrakumar	190613109017	UGVCL	31/05/21	14/06/21

Sr. No	Name of Student	Enrollment No	Name of Industry	Duration	
				From	To
36	Thakor Sumitji Dalpatji	190613109020	Krupa Systems	31/05/21	15/06/21
37	Prajapati Mitulkumar Rameshbhai	190613109013	New Gujarat Sales & Service	28/05/21	13/06/21
38	Patel Dharmik Rajeshkumar	190613109009	Adaptive Engg Pvt Ltd	28/05/21	13/06/21
39	Patel Rutvik Vishnubhai	180610109044	Gujarat Control System	28/05/21	14/06/21
40	Dipak Chimanlal Solanki	180613109010	Anaxa Switch Gear Kit-Kat Fuse & Panel	01/06/21	15/06/21
41	Panchal Ashish Yogeshkumar	180610109034	Mihir Electrotrans	27/05/21	10/06/21
42	Patel Ashishkumar Rameshbhai	190613109008	M.B Electrical	27/05/21	12/06/21
43	Sadhu Ruchi Manishkumar	180610109054	GETCO	01/06/21	15/06/21
44	Malek Rakib	189610109025	220 KV Sub Station Snakhari GECTO	05/06/21	18/06/21

## Faculty Training

Sr. No.	Faculty	Training Title	Organizer	From	To
1	Prof. A. M. Patel	Elements of Solar Energy Conversion	NPTEL	18/01/21	09/04/21
2	Prof H. V. Hirvaniya	Course on “Fundamental of Power Electronics “	NPTEL	01/01/21	30/04/21

## Expert Talk

1. Dr. A. M Patel has delivered expert talk on “Solar Rooftop System Design and Applications” at NIRDHARA ENERGY AND IT SOLUTIONS, Ghatlodiya, Ahmedabad - 380061, Gujarat on dated 08/06/2021.
2. Dr. A. M Patel has delivered expert talk on “Design Specification of Solar PV System ” at NIRDHARA ENERGY AND IT SOLUTIONS, Ghatlodiya, Ahmedabad - 380061, Gujarat on dated 09/06/2021.

3. Dr. A. M Patel has delivered expert talk on “Solar PV Project Economics and Management” at NIRDHARA ENERGY AND IT SOLUTIONS, Ghatlodiya, Ahmedabad - 380061, Gujarat on dated 10/06/2021.

Solar PV Project Economics and Management

4. Prof. J. H. Patel has Delivered Expert lecture on “MATLAB and its Application in Control System Engineering” in Gujcost Sponsored Two Days e-Workshop on “Hands on Session: MATLAB Tool and its Application” Organized by Department of Electronics and Communication Engineering, Sankalchnad Patel College of Engineering, Visnagar (Gujarat) held on April 16-17, 2021.

## Department Faculty

Sr. No.	Name of Faculty	Designation	Highest Qualification	Teaching Experience
1	Prof. B R Patel	Assistant Professor	M.E. (Power System)	16
2	Prof. A M Patel	Assistant Professor	Ph.D. (Electrical)	14
3	Prof. H N Chaudhari	Assistant Professor	M.E. (Power System)	10
4	Prof. H V Hirwaniya	Assistant Professor	M.Tech. (Electrical)	9
5	Prof. K G Prajapati	Assistant Professor	M.E. (Power System)	7
6	Prof. M G Prajapati	Assistant Professor	M.E. (Industrial Electronics)	8
7	Prof. M K Patel	Assistant Professor	M.Tech. (Electrical)	6
8	Prof. J H Patel	Assistant Professor	M.E. (Power System)	9