

Criterion 2 Teaching- Learning and Evaluation

Key Indicator- 2.3 Teaching- Learning Process

2.3.1 Student Centric Methods





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2.3.1 Student centric methods, such as experiential learning, participative learning and problem solving methodologies are used for enhancing learning experiences and teachers use ICT- enabled tools including online resources for effective teaching and learning process

Sl .No	Description	Page No.		
	Experiential Learning			
1	Laboratory work	1-39		
2	Industrial visits	40-53		
3	Field visits	54-57		
4	Group projects	58-85		
5	Annual Project Expo	86-86		
6	Internships	87-95		





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ACADEMIC YEAR 2022 – 2023

Practical Courses

S. No.	Reg. No.	Name of the Students	Practical Courses
1	411519105001	S. Abimanyu	4
2	411519105002	C Archana jenifer	
3	411519105003	S Balaji	
4	411519105005	M Durai raj	
5	411519105006	R Hariharan	EE8711 Power system simulation laboratory
6	411519105007	P Iyappan	
7	411519105008	K. Ponnarasi	EE8712 Renewable Energy systems Laboratory
8	411519105009	R. Savitha	•
9	411519105010	P surya	EE8811 Project work
10	411519105011	M. Vinoth kumar	
11	411519105301	V dinesh kumar	
12	411519105303	V. Prakash.	

Third Year

S. No.	Reg. No.	Name of the Students	Practical's Courses
1	411520105001	R.L.Arunachalam	
2	411520105003	S.Chandru	
3	411520105004	K.Janarthanan	
4	411520105005	D.Jayanth	EE8511 Control and Instrumentation
5	411520105006	V.Keerthana	CS8383 Object Oriented programming laboratory
6	411520105007	R. Krishnakumar	
7	411520105008	A. Nitheesh	HS8581 Professional Communication
8	411520105009	C.Pavithra	
9	411520105010	A.Poovarasan	



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10	411520105011	A.Praveenkumar
11	411520105012	R.Rajkumar
12	411520105013	Ramya.S
13	411520105014	E.Saravanan
14	411520105015	Sivaramakrishnan. R
15	411520105016	G.Srikanth
16	411520105017	G.Vigneshwaran
17	411520105018	M.Yuvashree
18	411520105301	B.Abishek samuel
19	411520105302	S.Anuramabarathi
20	411520105307	S.Gokul
21	411520105309	Harish.P
22	411520105310	R.Harish
23	411520105311	P.Jancy Reena
24	411520105312	S.Jayanthan
25	411520105313	M.Kavikumar
26	411520105314	A.Kingslin
27	411520105315	Mariakalai.P
28	411520105319	S.Nivetha
29	411520105324	S. Sarvesh
30	411520105330	M.Suresh
31	411520105331	Thirsha M
32	411520105332	M. Thomas Richard
33	411520105333	R.Varshini
34	411520105334	P. Velu
35	411520105335	M.Venkatesh
		

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Second Year

1	411521105001	Ashish J	
2	411521105002	Bubesh S	
3	411521105004	Divya R	
4	411521105006	Kamalavendhan S	
5	411521105007	Kaviya M	
6	411521105008	Keerthika V	
7	411521105009	Likhitha J	
8	411521105011	Murali S	
9	411521105012	Nikitha N	
10	411521105013	Nisha B	EC3311Electronic devices and Circuits
11	411521105015	Pothigachalam U	Laboratory
12	411521105017	Priyanka M	EE3311Electrical Machines Lab-I
13	411521105018	Sabitha S	CS3362 C Programming and Data
14	411521105019	Samy K	Structures Laboratory
15	411521105020	Saravanan K	Ge3361 Professional Development
16	411521105021	Shasidharan K	
17	411521105022	Sivaraj R	
18	411521105023	Thivya S	
19	411521105024	Varunraj G	
20	411521105025	VinayagaMoorthy M	
21	411521105305	Kamaraj.K	
22	411521105311	B.Sandhanakrishnan	
23	411521105312	A.Sethuraman	
24	411521105501	K Prasanth	

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ELECTRONICS AND COMMUNICATION ENGINEERING

BS 13 COMMUNICATION SYSTEMS LABORATORY

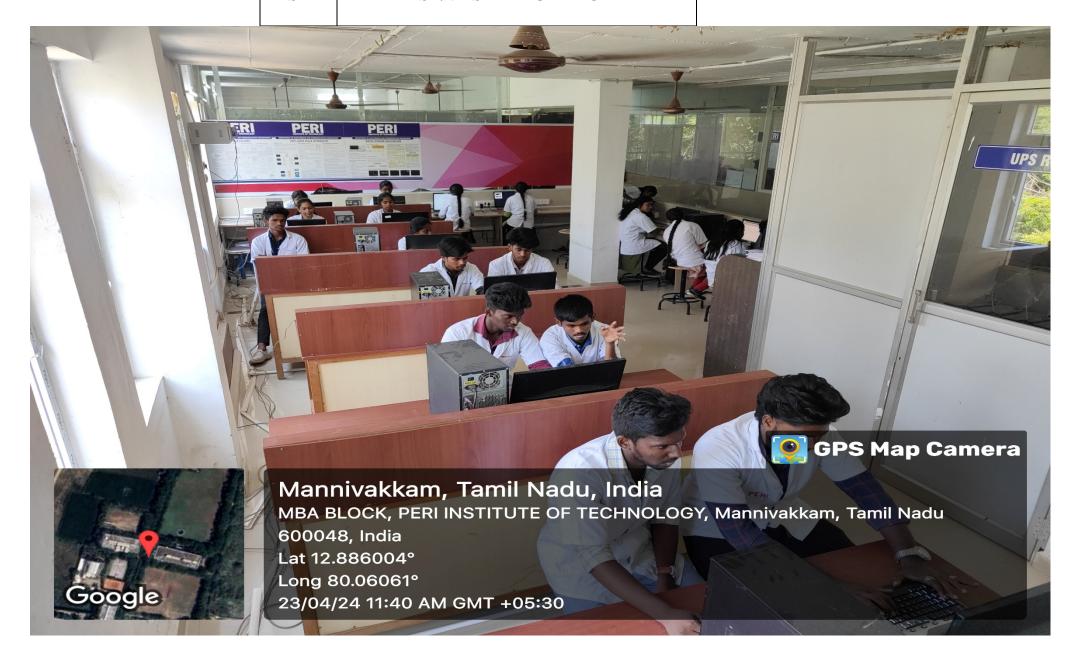






BS 14

DSP/VLSI LABORATORY



BS 16 NETWORKS LABORATORY



DEPARTMENT OF CIVIL ENGINEERING

BF 17 ENVIRONMENTAL ENGINEERING LABORATORY







BG 14 HIGHWAY ENGINEERING LABORATORY



BG 01 MATERIAL TESTING LABORATORY





DEPARTMENT OF MECHANICAL ENGINEERING



BG 12 THERMAL LABORATORY



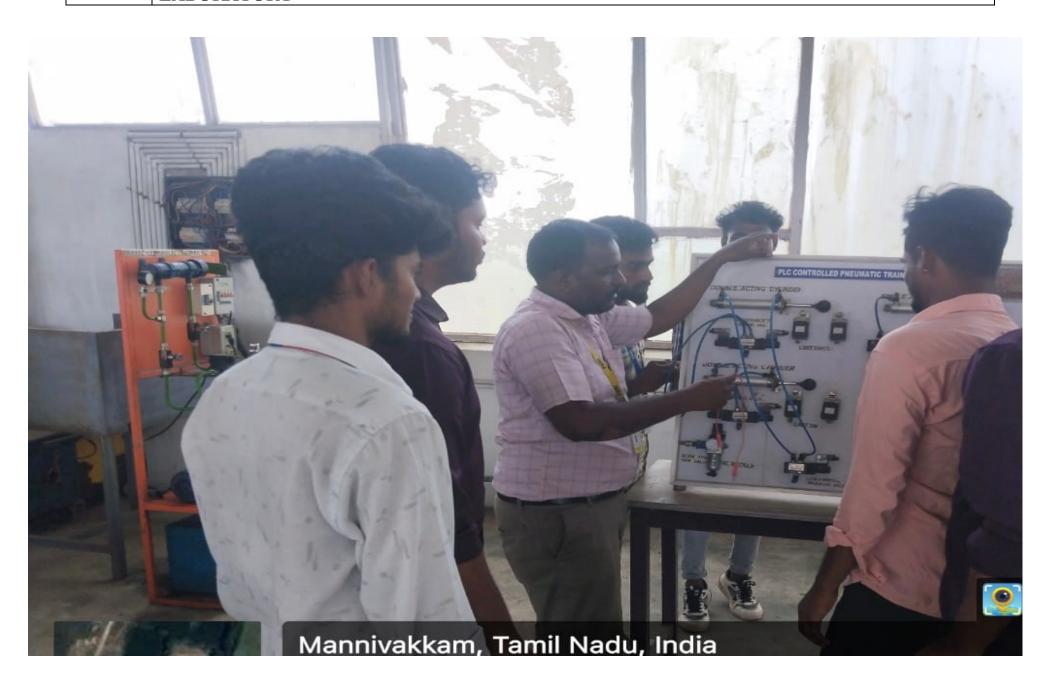




BF 02 MANUFACTURINGTECHNOLOGY LABORATORY



BG 01 STRENGTH OF MATERIALS LABORATORY/ METEOROLOGY AND MEASUREMENTS LABORATORY



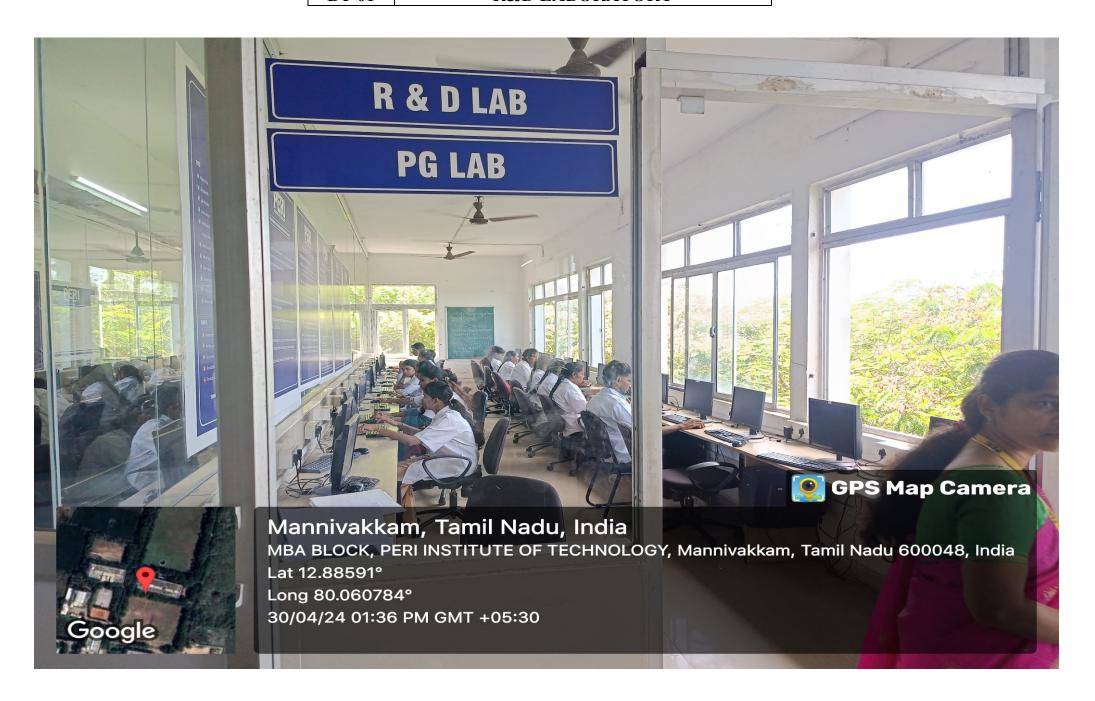


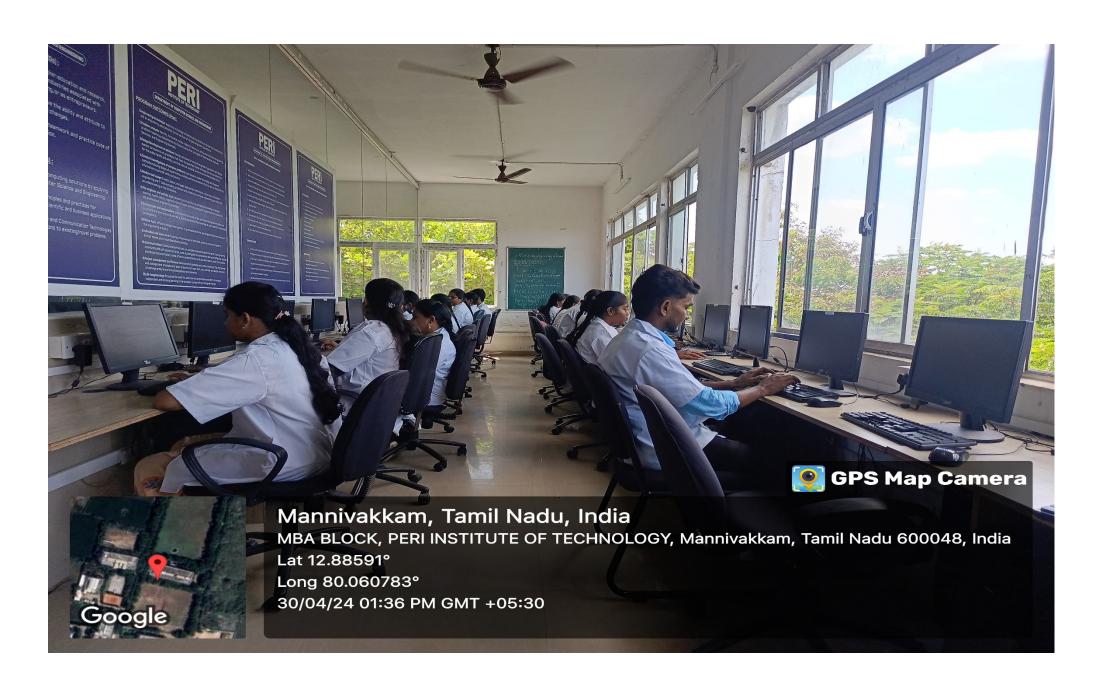
BT 10 ENGINEERING CHEMISTRY LABORATORY



BS 11 ENGINEERING PHYSICS LABORATORY







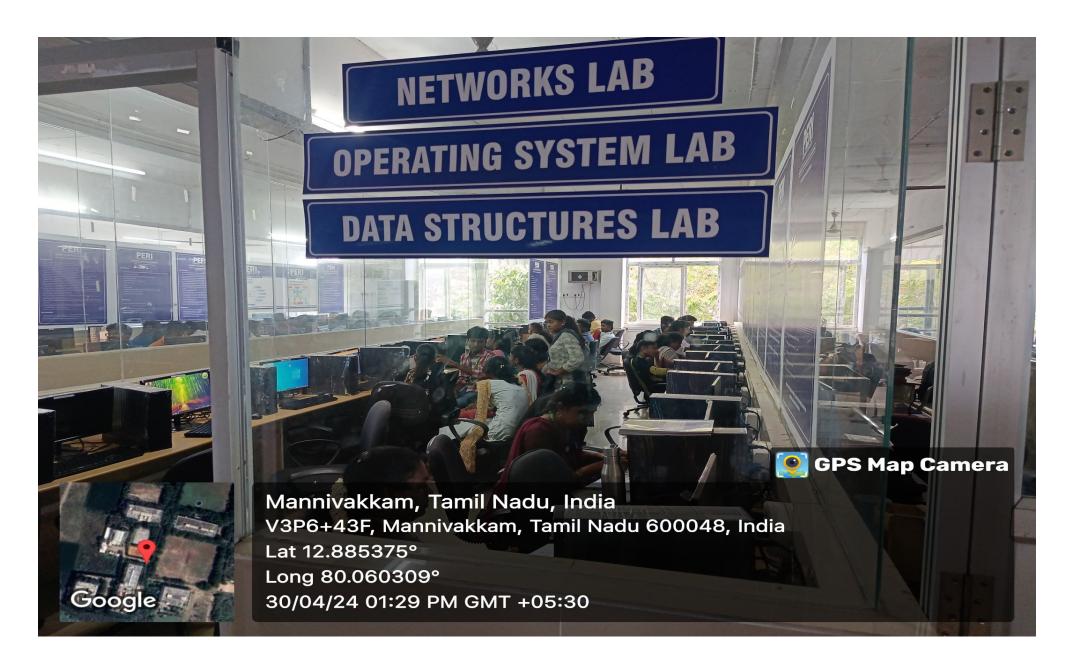


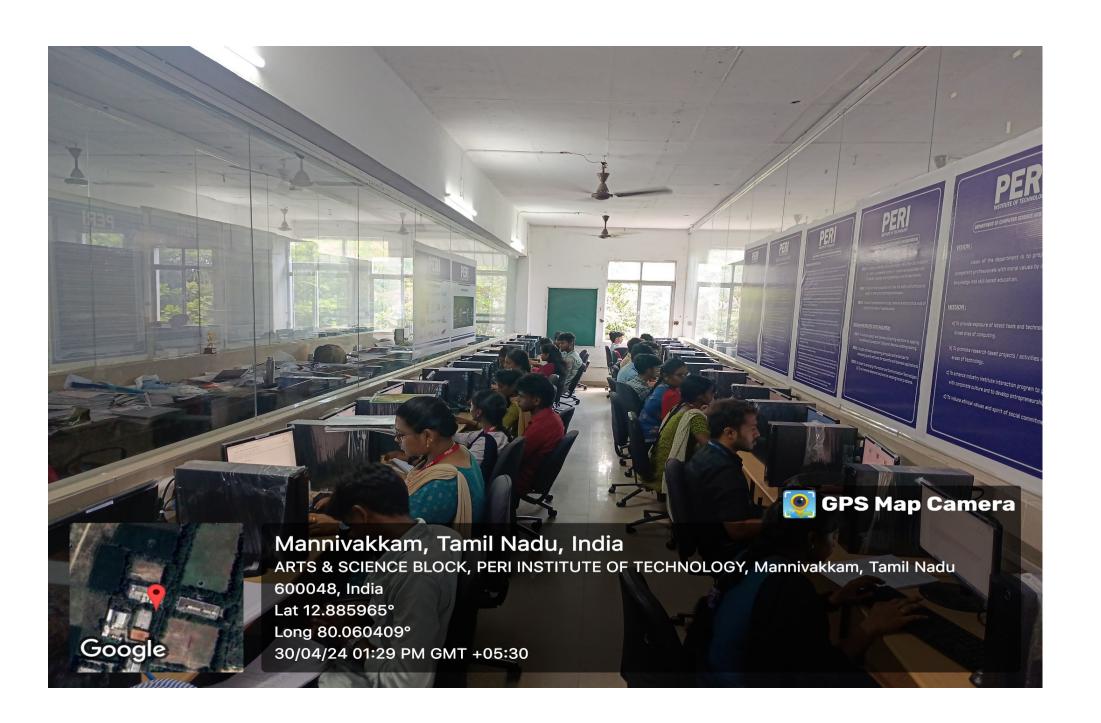


SECURITY LABORATORY





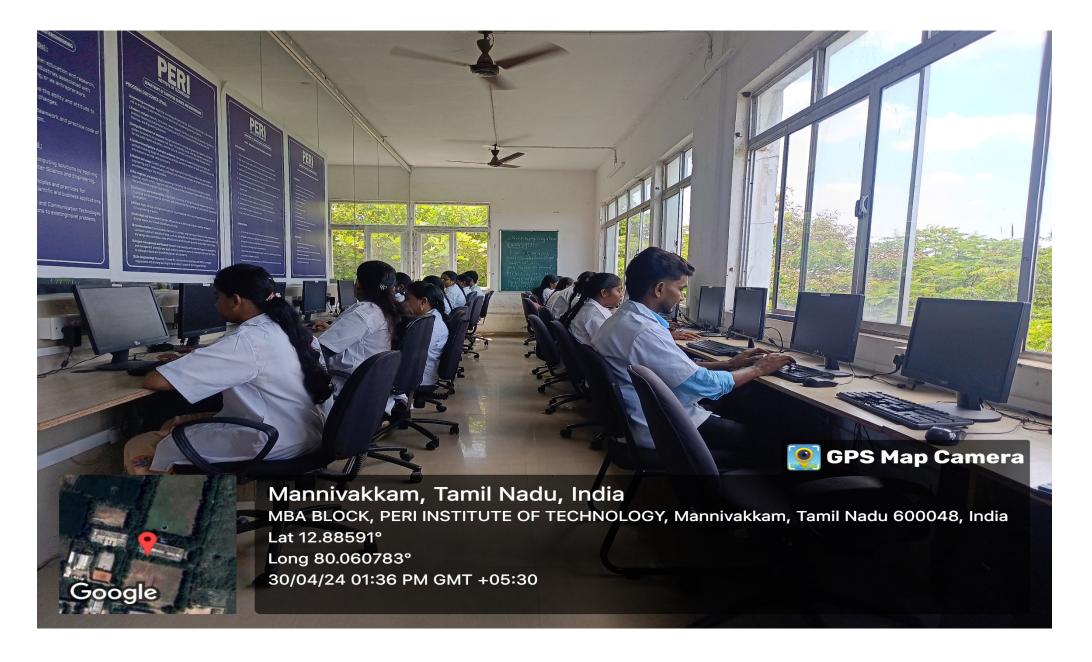








BT 16 IOT LABORATORY



BT 17

OOPS & DBMS LABORATORY



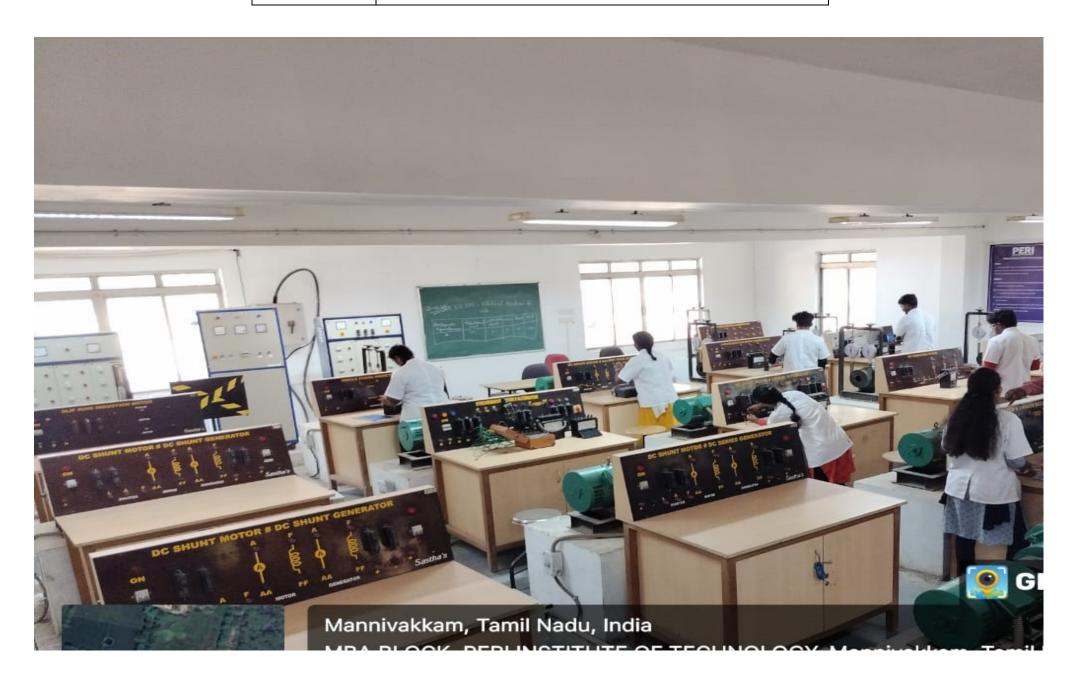
BF11

POWER ELECTRONICS LABORATORY





ELECTRICAL MACHINES LABORATORY







DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

PERIIT/CSE/2022-23/IV/003

Date: 10.02.2023

Circular

This is to inform all the students of CSE Department, that the department is organizing an Industrial Visit for the students of 2nd year in Axis Global Automation on 13.02.2023 & 14.02.2023 at their premises. All the students of 2nd year must attend the program without fail.

Head of the Beparlment

Copy To:

File

Notice Board

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PERT INSTITUTE OF TECHNOLOGY Mannivakkain, Chennai - 600 048.

Zimbra

hodcse@peri.ac.in

Industrail visit requistion-reg

From: HOD CSE < hodcse@peri.ac.in>

Sat, Jan 28, 2023 11:57 AM

Subject: Industrail visit requistion-reg

To: murugan@axisglobalautomation.com

Dear Sir/Madam,

Greetings of the day. This is K. Varalakshmi, Head of CSE Dept, PERI Institute of Technology. I am writing this letter to seek your permission for the visit at your organization in the month of February on 13th and 14th for II year students (2 Batches). The visit is aimed at enhancing students knowledge. I hope you will provide us the opportunity to visit your industry and meet your skilled staff. I anticipate positive response from your side.

lindly accept our request and do the needful.

Thanks and Regards, K.Varalakshmi HOD/CSE PERI Institute of Technology

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1 of 1

Zimbra

hodcse@peri.ac.in

Industrial visit requistion -reg

From: HOD CSE < hodcse@peri.ac.in>

Thu, Feb 09, 2023 05:54 PM

Subject: Industrial visit requistion -reg

To: nalini retech < nalini.retech@gmail.com >

Dear Sir/Madam,

Greetings of the day. This is K. Varalakshmi, Head of CSE Dept, PERI Institute of Technology. I am writing this letter to seek your permission for the visit at your organization in the month of February on 20th and 22nd for III year students(2 Batches). The visit is aimed at enhancing students knowledge. I hope you will provide us the opportunity to visit your industry and meet your skilled staff. I anticipate positive response from your side.

Kindly accept our request and do the needful.

Thanks and Regards, K. Varalakshmi HOD/CSE PERI Institute of Technology

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Mannivakkain, Chennai - 600 048.



DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING Industrial Visit

F.No:

Page: 1/1

Local Industrial Visit

1. Branch/ Dept. : Computer Science and Engineering

2. Year & Semester : II Year & IV Semester

3. Visit No. for current semester: 1

4. Total Number of Boys : 76

5. Total Number of Girls : 51

6. Number of Hostel Boys : 22

7. Number of Hostel Girls : 14

8. Accompanying Staff : Mr.S.R.Noble Lourdhu Raj, Mrs.G.S.Gayathri,

Mr.A.VijayaNarayanan & Mrs.C.Kalaiarasi

9. Name of Industry : Axis Global Automation

Address Tel. No. along #75/65, 2nd floor, Opp. Kasi Theater,

With STD code Anjugam Nagar 3rd Street Ashok Nagar, Chennai - 83

+91 44- 42656465 / 67

+91 9841 841 842 / +91 9843641684

10 Contact person : Mr. Murugan

11. Date of visit : 13.02.2022Monday& 14.02.2022 Tuesday

12. Permitted time of entry into

`Industry : 10.AM

13. Time of leaving the campus : 9.00AM

14. Time of reaching the industry: 10.10AM

15. Time of leaving the industry :2.30PM

16. Time of returning back to : 3.30 PM

Campus

HODs Signature

Copy to:

- 1. Principal
- 2. Transport in-charge
- 3. Hostel In-charge

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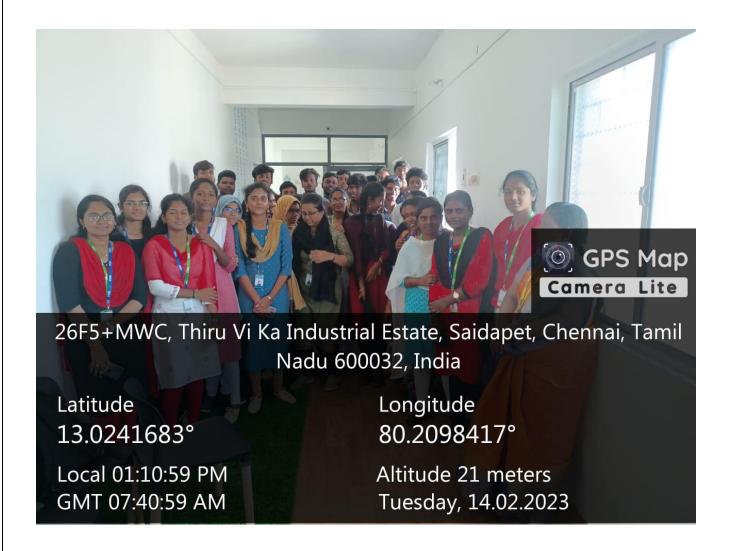
Report on Industrial visit to Axis Global Automation Pvt. Ltd

An Industrial visit was organized by the department of Computer Science and Engineering for the higher semester students (II year 'B' sec) to *Axis Global Automation Pvt. Ltd* dated on 14th Feb 2023. The purpose of the visit to the organization was to enhance the knowledge of the students in the emerging technologies and trends.

The students were accompanied with Mr. A. Vijayanarayanan, Mrs. C. Kalaiarasi of Computer Science department who actively participated in the visit , *Axis Global Automation* was the resource person for the day.

To get an industrial exposure, the department organized industrial visit. , *Axis Global Automation* gave a presentation about Automation System.

The session was held with the intent of enlightening the students about their career opportunities, recent trends and emerging technologies in Automation. A demo session on "Automation" was organized with the aim of introducing students to the career opportunities in the field of Automation.





The presentation and interaction of the speaker was very effective and the students interacted enthusiastically and the resource person answered their queries and cleared their doubts.



We express our thanks to the Technical Head and all team members of *Axis Global Automation* Pvt Ltd spent their valuable time for us. We also thank to our respected Principal and HOD who motivate us to arrange such an informative program. It was a live and a wonderful program. Lately we request you to arrange more industrial visit in the future for the students which will be helpful for students and help to train our students.



PERI INSTITUTE OF TECHNOLOGY DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

EVEN SEMESTER 2022-2023

CLASS: II CSE A

S.NO	REG. NO.	NAME	SICNATURE
1	411521104001	Abdul Majith A	SIGNATURE
2	411521104001	Abishekraj K B	Act of the
3	411521104003	Abinash S	Abeliks
			June 1
4	411521104004	Adnan Mohammed S	Adnan Mohammed,
5	411521104005	Akash Jebaraj I	Butit
6	411521104006	Annamalai M	Annamatel
7	411521104007	Archana B	Barbana
8	411521104008	Arokia Anushya A	Arubflow
9	411521104009	Arul Pandian P	Aral pandi
10	411521104010	Ashwin V	V Aslami
11	411521104011	Bargavi A V	Eman'
12	411521104012	Bhuvanesh G	1 rets
13	411521104013	Chandrakala V	chardre
14	411521104014	Chandru B S	charlery B
15	411521104015	Damodaren V	Damodaran
16	411521104016	Dayana M	Payana
17	411521104017	Deepak J	D. Durk
18	411521104018	Deepak Kumar K	Pappah kona
19	411521104019	Deepan M	arch
		Deepan	D
20	411521104020	Chakkaravarthi K	Deepun.
21	411521104021	Devakumari S	Lanakuner
22	411521104022	Devatharshini B	devatharin
23	411521104023	Dhanush V	Phonush
24	411521104024	M. Paradeop kumay	De
25	411521104025	Dharani T	Shown IT.
26	411521104026	Dinesh V	Pi run
27	411521104027	Dinesh Chaudhary D	Wheel chardy
28	411521104028	Dinesh Kumar L	Dinest
29	411521104029	Dinesh Kumar M	Diver
30	411521104030	Dinesh Kumar S	Dineshlumas
31	411521104031	Divya S	Diug S
32	411521104032	Elakiya K	K Platiyer
33	411521104033	Elakya R	R. Elalaya
34	411521104034	Franklin Joshwa S	Franklin 100
35	411521104035	Gayathri B	Brayating -B
36	411521104036	Gokul D	ALAXIII.
37	411521104037	Gokul R	7. holad

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38	411521104038	Gowsalya D	Crans
39	411521104039	Guberan T	Gubern
40	411521104040	Hari Krishnan U	heri kinha
41	411521104041	Harini M	Handufe
42	411521104042	Harish S	Hours S
43	411521104044	Ishasri P	Johanni
44	411521104045	Jagan M	Jagant
45	411521104046	Jana R	Jana R.
46	411521104047	Jeffrin Nelson J	Tou
47	411521104048	Jitto M	dittin 1 -
48	411521104050	Jogan Roy K	Joglandon
49	411521104051	Karthi S	Kar -
50	411521104052	Karthika E	4
51	411521104053	Karthikeyan N	16m hilleys
52	411521104054	Kavitha S	Kavilha
53	411521104055	Kavitha V	Kawitha
54	411521104056	Keerthika M	hulti
55	411521104057	Keerthivasan S	Kushivene
56	411521104058	Kowsalya B	B. Kousalya
57	411521104059	Lakshmi Priya M	Mosey!
58	411521104060	Lavanya B	famer 13.
59	LE1	Arun.B	down
60	LE2	Harish.P	Harrich-
61	LE3	Pradeep.M	tondoop
62	LE4	Chirstopher Daniel.S	Therstonn

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PERI INSTITUTE OF TECHNOLOGY DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

EVEN SEMESTER 2022-2023

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	ADD.			~

S.NO	REG. NO.	NAME	SIÇNATURE
1	411521104061	Lavanya P	Lavanya
2	411521104063	Little Jacob P	little togat
3	411521104064	Madhumitha S	Suthmitta.
4	411521104065	Mageswari D.	Mogeman
5	411521104066	Maha Lakshmi M	Machalalalumi"
6	411521104067	Maluni B	Mohni
7	411521104068	Mariya Joshwa S	mariga Lahua
		Meenatshi	Meenalshi
8	411521104069	gunavathi R	gunava thi
		Mohammmed	2011
9	411521104070	Abdul Rahim P	Mohammed Abdu
10	411521104071	Mohan Raj M	Mothan Ray
11	411521104072	Mohan Raji S.	Hohan repp
12	411521104074	Navya Vijayan	Navya Vipya
13	411521104075	Nimmi Hassan P	Minumi Hallan
14	411521104076	Nitish Kumar S	Nuto & Kunor
15	411521104077	Nivedya V.	Nivodya
16	411521104078	Nivetha R	Ninta
17	411521104080	Pavithra U	Powetter
18	411521104081	Pooja B.	Pooja
19	411521104082	Poojasree A	Poojarra
20	411521104083	M. Pradep Kumar	Prolect
21	411521104084	Priya M l	Priza
22	411521104085	Priyadharshini R	Rivyadharshin
23	411521104086	Pugazhendhi J	Projozhenchi
24	411521104087	Pushparaj E	NO
25	411521104088	Rahul A.D	TEL
26	411521104089	Rajaram D	Rejamo
27	411521104090	Ramya R	ramua
28	411521104091	Ranjith S	Rothrika
29	411521104092	Rathmikaa V.V	Rothnikaa
30	411521104093	Reshma A	Rashma
31	411521104094	Rishikesh R	Ruhilesta
32	411521104095	Sabarivasan S	Sabareran &
33	411521104096	Sagana R	dagana
34	411521104097	Sai Prasanth A	Days
35	411521104098	Sakthi Aswin S	Loth
36	411521104099	Shaajini Arul A	Thagin
37	411521104100	Shifa Shamim Sibe M.	Thyo
38	411521104102		

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39	411521104104	Siva M	Stra
40	411521104105	Siva S	Sime
41	411521104106	Sivakumar E.S	Sirakunan
42	411521104108	Sneha P S	hahr
43	411521104109	Stalin M	Salin
44	411521104110	Stephen I	Shephin
45	411521104111	Suchit R	Stelv
46	411521104112	Sudharsan B	Sulhausan
47	411521104113	Sunilkumar K A	livil human
48	411521104114	Suriya M	higa 11
49	411521104115	Sushthi R	Sushthi " Destruction of the
50	411521104116	Tharun M	Thorus
51	411521104117	Theja Sri H.	Their Cour
52	411521104118	Veena P.G	VEENA
53	411521104119	R. Vignesh kumar	Vage
54	411521104120	Vinodha V	Vinach
55	411521104121	Vinothini V.	Vindi
56	411521104122	Yogavarshini R	YOSE VONLA
57	411521104123	Yuhan S	Juhan
58	LE 1	Sakthivel	daletherel

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14.



DEPARTMENT OF COMPUTER SCIENCE ENGINEERING

INDUSTRIAL VISIT FEEDBACK FORM

Date of Visit : $|U| O_2$ 23

Name of Student : SAI PRASANTH-A
Course and Branch: BE BE / CSE
Roll No: 411521104097
Name and Address of Industrial Visit Organization .
1. State two important experiences that had been gained from the Industrial Visit: 1, Learned about the automation of switches feelog
2. Main problems encountered during the industrial Visit:
mathema .
3. How do you evaluate your overall training Visit?
☐ Excellent ☐ Satisfactory ☐ Not satisfactory
4. Types of exposure given:
Learned well Learned better Learned nothing Others
5. Your satisfaction level after Industrial Visit (only tick): (5: highest; 1: lowest)
Signature Dr. R. PALSON KENNEDY, M.E., Ph.D PRINCIPAL

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DEPARTMENT OF COMPUTER SCIENCE ENGINEERING

INDUSTRIAL VISIT FEEDBACK FORM

14.02.2023

Date of Visit

Name of Student M. SURIYA Course and Branch B.E. CSE
Course and Branch B.E. CSE
Roll No 411521104114
Name and Address of Industrial Visit Organization
1. State two important experiences that had been gained from the Industrial Visit: (1) Experience and learned from New technology.
2. Main problems encountered during the industrial Visit:
3. How do you evaluate your overall training Visit?
☐ Excellent ☐ Satisfactory ☐ Not satisfactory
4. Types of exposure given:
☐ Learned well Learned better ☐ Learned nothing ☐ Others
5. Your satisfaction level after Industrial Visit (only tick): (5: highest; 1: lowest)
Signature Dr. R. PALSON KENNEDY, M.E., PAD PRINCIPAL PERI INSTITUTE OF TECHNOLOGY Mannivakkain, Chennai - 600 048.



DEPARTMENT OF COMPUTER SCIENCE ENGINEERING

INDUSTRIAL VISIT FEEDBACK FORM

Date of Visit 14 | 2 | 23

Nam	rse and Branch BE CSE
Cou	rse and Branch BE CSE
Roll	
Nam	e and Address of Industrial Visit Organization
1. Visit	State two important experiences that had been gained from the Industrial Use Lapleieuce about the industrial VISE
2.	Main problems encountered during the industrial Visit: technology
3.	How do you evaluate your overall training Visit?
٥.	
	Excellent Satisfactory Not satisfactory
4.	Types of exposure given:
	Learned well Learned better Learned nothing Others
5.	Your satisfaction level after Industrial Visit (only tick): (5: highest; 1: lowest)
Sign	Dr. R. PALSON KENNEDY, M.E., Ph.D PRINCIPAL PERI INSTITUTE OF TECHNOLOGY Mannivakkain, Chennai - 600 048.



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REPORT ON 'ONE-DAY FIELD VISIT'

Date and Time: 17.09.2022 &1 P.M To 3 P.M **Venues**: PERI, Power Transformers

Objective: To visit "**PERI Power transformers distribution unit**" Mannivakkam a premier private Organization in Electrical / Electronic Engineering.

A one-day field visit was recently organized on September 17, 2022, by Mrs. S.L. Sreedevi, HOD- EEE of PERI IT. Under the guidance of Asst. Prof. Mr. A. Antony Charles Asst. Prof. Mr. Tamilamuthan Asst. Prof., Ms. A. Vijayalakshmi Asst. Prof., and Mrs. P. Yamuna Asst. Prof., the field visit to PERI IT Mannivakkam, Chennai, conducted exclusively for the students of EEE PERI IT, was a grand success.



PERI Power transformers connections with HV/LT side connections



EEE students getting information about wiring of transformers connections



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Participation of II-year students in the Field Visit



Participation of III-year students in the Field Visit



Participation of IV-year students in the Field Visit





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AICTE Permanent ID Number: 1-5937291

Department of Electrical and Electronics Engineering

Students Name list- Field Visit- PERIIT

S. No	Register Number	Name of the student	Year
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2.	411521105002	Bubesh S	II
3.	411521105004	Divya R	II
4.	411521105007	Kaviya M	II
5.	411521105008	Keerthika V	II
6.	411521105009	Likhitha J	II
7.	411521105011	Murali S	II
8.	411521105012	Nikitha N	II
9.	411521105013	Nisha B	II
10.	411521105015	Pothigachalam U	II
11.	411521105017	Priyanka M	II
12.	411521105018	Sabitha S	II
13.	411521105019	Samy K	II
14.	411521105020	Saravanan K	II
15.	411521105021	Shasidharan K	II
16.	411521105022	Sivaraj R	II
17.	411521105023	Thivya S	II
18.	411521105024	Varunraj G	II
19.	411521105025	Vinayaga Moorthy M	II
20.	411520105001	R.L.Arunachalam	III
21.	411520105003	S.Chandru	III
22.	411520105004	K.Janarthanan	III
23.	411520105005	D. Jayanth	III
24.	411520105006	V .Keerthana	III
25.	411520105008	A. Nitheesh	III





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27.	411520105010	A.Poovarasan	III
28.	411520105011	A.Praveenkumar	III
29.	411520105012	R.Rajkumar	III
30.	411520105013	Ramya.S	III
31.	411520105014	E.Saravanan	III
32.	411520105015	Sivaramakrishnan. R	III
33.	411520105016	G.Srikanth	III
34.	411520105017	G.Vigneshwaran	III
35.	411519105001	Abimanyu S	IV
36.	411519105002	C Archanajenifer	IV
37.	411519105003	S.Balaji	IV
38.	411519105004	Dinesh J	IV
39.	411519105005	M.Durairaj	IV
40.	411519105006	Hariharan R	IV
41.	411519105007	P.Iyappan	IV
42.	411519105008	K.Ponnarasi	IV
43.	411519105009	R.Savitha	IV
44.	411519105010	P.Surya	IV
45.	411519105011	M.Vinothkumar	IV

Dr. R. PALSON KENNEDY, M.E., PA.D.,
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BONAFIDE CERTIFICATE

Certified that this project "E-BOAT USING SOLAR WITH DUAL AXIAL SOLAR TRACKER" is the bonafide work of BALAJI. S (411517105003), PONNARASI.K (411517105008), PRAKASH.V (411519105303) and who carried out the project work under my supervision.

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Submitted for the VIVA-VOCE Examination held on 18.05.2023

EXAMINER

Dr. R. PALSON KENNEDY, M.E., Ph.D., PRINCIPAL PERI INSTITUTE OF TECHNOLOGY Mannivakkam, Chennai - 600 048.

ABSTRACT

In this project, we are going to build Electrical boat using solar panel and we are going to change the solar panel angle based upon Sunlight direction with the help of solar tracker, we are going to combine both solar tracker and solar panel and we are also going to change the position of the solar panel using dual axis solar tracker. It has been shown that these sun tracking systems can be broadly classified as single axis and dual axis, depending on their mode of rotation. Further it can be classified as active and passive tracker depending on the actuator. The sub division and their basic principles of each method have been reviewed. Overall, the results presented in this review confirm that the azimuth and altitude dual axis tracking system is more efficient compared to other tracking systems. In future the present paper details will be useful in selecting an accurate and particular tracker with respect to region, available space and estimated cost. The another benefit of project is that the reduction of pollution, so that the ozone layer can be prevented from pollution and global warming can also be avoided.

Dr. R. PALSON KENNEDY, M.E., Ph.D.,
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BONAFIDE CERTIFICATE

Certified that this project "HIGH EFFICIENT MULTIPLE ENERGY STORAGE SMART CYCLE" is the bonafide work of IYAPPAN.P. (411519105007), SURYA.P (411519105010), VINOTH KUMAR.M (411517105011) and who carried out the project work under my supervision.

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INTERNAL EXAMINER

Dr. R. PALSON KENNEDY, M.E., Ph.D., PRINCIPAL PERI INSTITUTE OF TECHNOLOGY

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ABSTRACT

In this project, we are going to build high-efficient multiple energy storage smart cycle. The frequent news about the extinction of fossil fuels has increased the importance of usage of electricity in the future. Electric Vehicles will be utilized to a greater extent. Office going people and people who travel moderate distances will be benefited from the electric bicycle. The electric bi-cycle contains motor to help the vehicle move forward and various power sources are being used. The batteries provide power to the motor and the motor drives the vehicle. When the battery is fully discharged the battery is recharged again by using a dynamo, solar panel and plug-in charging (Three-way charging). In this project, we have used a DC motor/generator attached to the rear wheel of the bicycle. Two sets of batteries are connected to the setup such as A and B. When one of the batteries gets discharged another battery will provide the power required. During that time, the rotation of the front wheel rotates the dynamo which produces an output of voltage and then at stopping time solar panel or plugin charging is used. The system has a mobile controllable switch that facilitates smooth transitions between charge and discharge operations of two battery, ensuring uninterrupted power supply. Additionally, the cycle features a key safe anti-theft system, providing an extra layer of security that allows users to locate Lesson the bike in case of theft.

IV

ANNA UNIVERSITY: CHENNAI 600 025

BONAFIDE CERTIFICATE

Certified that this project "QUASI SWITCHING BUCK BOOST CONVERTER FOR DC TRANSMISSION LINE" is the bonafide work of ABIMANYU. S (411519105001), DINESH KUMAR.V (411519105301), HARIHARAN.R (411519105006) and who carried out the project work under my supervision.

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INTERNALEXAMINER

ABSTRACT

This paper presents the design and implementation of a quasi-switching buck-boost converter for voltage regulation in power transmission lines. The converter is designed to step up or step down the voltage of the power being transmitted along the line to maintain a stable voltage at the load end. The quasi-switching circuitry allows the switching device to turn off naturally when the current through it reaches zero, reducing switching losses and EMI, and improving overallefficiency. The paper describes the methodology for designing the converter, including selection of components, control circuitry, and testing and optimization. Simulation and experimental results demonstrate the effectiveness of the converter for voltage regulation in power transmission lines, showing stable output voltage, high efficiency, and low output ripple. The proposed converter can be a useful tool for voltage regulation in power transmission lines, helping to maintain a stable voltage at the load end and improve overall efficiency.

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Certified that this project "OPTIMAL RNN CONTROL OF STATCOM FOR EFFICIENT HYBRID RENEWABLE POWER SYSTEM WITH BATTERY" is the bonafide work of C. ARCHANA JENIFER (411517105002), M. DURAIRAJ (411517105005) and R. SAVITHA (411517105009) who carried out the project work under my supervision.

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ABSTRACT

This project proposes a various converters integrated with renewable sources to the utility grid along with its control strategies are proposed. The solar system provides voltage to the inverter through Self-lift Luo converter. The WECS with DFIG, AC-DC conversion takes place with the aid of PWM rectifier and the control of rectifier is carried out with a PI controller. To achieve energy management for the proposed system using Bidirectional Battery converter along with battery system. In this project to achieve the grid synchronization with DSTATCOM devices controlled by RNN controller with D-Q theory transformation. Under this work, DSTATCOM has been used to improve the quality of power under different conditions. The LC filter is employed to enhance the output of the inverter. The control outputs are the output power of the PV/FC input power sources as well as AC power injected into the power grid. The obtained results indicate that the proposed approach delivers better performance with enhanced efficiency and minimal harmonics. The entire project is validated through a MATLAB simulation 2021a.

Dr. R. PALSON KENNEDY, M.E., Ph.D.

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Certified that this project "ANIMAL TRAIN ACCIDENT DETECTION IN RAILWAY SIGNAL USNIG ULTROSONIC SENSORS" is the bonafide work of JANARTHANAN. K (411520105004), SARAVANAN.E (411520105014), SIVARAMAKRISHNAN. R(411520105015), VENKATESH. M (411520105335) and who carried out the project work under my supervision.

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INTERNAL EXAMINER

MATT 123 EXTERNAL EXAMINER

ii

ABSTRACT

The Indian railways are suffering from the collision of animal – rail in forest areas. Today, India has fourth largest railway network management in the world comes from United states, Russia and China. Considering an India as an example, in the past five years numerous laws has been passed by the government of India for the protection of wildlife sanctuaries and jungle animals nearby railway track. To overcome this problem, we analyzing the detection of crack and collision of animal – rail in the proximity area. If these deficiencies may result in increasing an Indian railway budget and loss life and property. In this paper proposing cost effectiveness solution to managing this problem of preventing the collision of rail – animal accidents. From this project we'll know how to implement the automation in railway Signal control using Arduino. Application of this project is the direct implementation in real world. Some components will be required more but the main working principle will be same. Now, other alerting systems can also be developed by using Arduino. The main aim of this project is to reduce train accidents at railway level crossings to the minimum.

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iv

ANNA UNIVERSITY: CHENNAI 600025 BONAFIDE CERTIFICATE

Certified that this project "INTELLIGENT WATER LEVEL MONITORING SYSTEM" is the Bonafede work of "S.RAMYA (411520105013), P.HARISH (411520105309), P.JANCY REENA (411520105311) and P.VELU (411520105334)" who carried out the project work under my supervision.

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INTERNAL EXAMINER

EXTERNAL EXAMINER

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ABSTRACT

Water level indicator is widely used in many industries and houses. People generally worry about the wastage of water, when the switch ON the motor and forget to OFF them. An Water Level Indicator may be defined as a system by which we can get the information of any water reservoir. Water level indicator system are quite useful to reduce the wastage of water from any reservoir, while filling such reservoir. But for domestic purpose we cannot go for the instruments which use radar or ultrasonic principle that costs high. Water tank overflow is a common problem which leads to the wastage of water. In this project we are using the metal sensor water level indicator circuit is very useful to indicate the water levels in a tank. Whenever tank gets filled, we get alerts on particular levels. The LEDs is generally used for indicate the water level is full, then the circuit beeps through the buzzer notifying that the water level is full.

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iv

BONAFIDE CERTIFICATE

Certified that this project "IMPLEMENTATION OF ENERGY EFFICIENT SMART STREET LIGHT MANAGEMENT SYSTEM FOR SMART CITY" is the bonafide work of KRISHNAKUMAR.R (411520105007), HARISH.R (411520105310), KINGSLIN.A (411520105314), (411520105330) and who carried out the project work under my supervision.

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Loogosand

Automatic Street Light Control System is a simple yet powerful concept, which uses transistor as a switch. By using this system manual works are 100% removed. It automatically switches ON lights when the sunlight goes below the visible region of our eyes. This is done by a sensor called Light Dependant Resistor (LDR) which senses the light actually like our eyes. It automatically switches OFF lights whenever the sunlight comes, visible to our eyes. By using this system energy consumption is also reduced because nowadays the manually operated street lights are not switched off even the sunlight comes and also switched on earlier before sunset. In this project, no need of manual operation like ON time and OFF time setting. This project clearly demonstrates the working of transistor in saturation region and cut-off region. The working of relay is also known.

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BONAFIDE CERTIFICATE

Certified that this project report SOLAR PANEL CLEANING USING WIPER WITH DIGITAL TIMER is the bonafide work of ARUNACHALAM. R.L (4115201053001), CHANDRU. S (411520105003), JAYANTHAN. S (411520105312), SARVESH. S (411520105324) and who carried out the project work under my supervision.

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2040JW

In this project we are going to build a solar panel cleaner using a wiper and we are going to set the digital timer in the automatic mode to control the wiper automatically by turning on and off for the programmed time. It has been shown that hese timer systems can be broadly classified into digital and Arduino based timer system. The sub divisions and their basic principles of each method have been eviewed. The Arduino based timer system costs more than the digital timer and so the ligital timer is used here, but the Arduino timer system gives more efficiency than the ligital timer. In future the present paper details will be used for selecting an accurate cleaning of solar panel for any kind of dusts, dirt's and other contaminants which educes the efficiency of the solar panel. Another benefit of this project is that it shows he battery can easily be charged only through the solar panel and the brightness of the light can also increase.

Dr. R. PALSON KENNEDY, M.E., Ph.D.,
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ANNA UNIVERSITY: CHENNAI 600 025 BONAFIDE CERTIFICATE

Certified that this project " SWB-POWERED EMERGENCY MOBILE CHARGER" is the bonafide work of "C.PAVITHRA (411520105009) R.RAJKUMAR (411520105012) and P.SRIDHARAN (411520105327)" who carried out the project work under my supervision.

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This paper is about framework structures, in which cell phones go about as either dynamic or aloof gadgets relying upon accessible correspondence between advanced cells and their sun powered chargers. In recent days power generation using renewable energy sources gained more attraction. The most commonly available and used energy resources are solar and wind. The objective presented here is charging of low power electronic gadgets using the wind energy available during travelling. A DC generator with a Sepic converter provides voltage required for charging the gadgets when the vehicle speed exceeds 40km/hr. Even though the speed fall is observed, the gadgets will get continuously charged by the external battery source which is connected to the proposed circuit. This could be used as emergency source for charging electronic gadgets while travelling in a vehicle. The outcomes from the recreation and the trial show the plan's adequate achievability for down to earth usage. Coming 21st century, we have gained some astounding ground in making sun-based cells which are the devices energizing our future, changing over sun's imperativeness into power. This work is connected to using non-conventional imperativeness that is sun-arranged essentialness for adaptable battery charging. Sun controlled chargers are direct, helpful and arranged to utilize gadgets which can be utilized by anybody particularly in faraway locales.

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BONAFIDE CERTIFICATE

Certified that this project report " SMART FOOT STEP POWER

GENERATION" is the bonafide work D. JAYANTH (411520105005),

A.PRAVEENKUMAR

(411520105011)

and

M.YUVASHREE

(411520105018) who project work under my supervision.

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The project report submitted for the viva voce held on 01/06/2023

INTERNAL EXAMINER

EXTERNAL EXAMINER

ii

Electrical energy is important and had been demand increasingly. A lot of energy resources have been wasted and exhausted. An alternative way to generate electricity by using a population of human had been discovered When walking, the vibration that generates between the surface and the footstep is wasted. By utilizing this wasted energy, the electrical energy can be generated and fulfill the demand. The transducer that uses to detect the vibration is a piezoelectric transducer. This transducer converts the mechanical energy into electrical energy. When the pressure from the footstep is applied to the piezoelectric transducer, it will convert the pressure or the force into the electrical energy. The piezoelectric transducer is connected in series-parallel connection. Then, it is placed on the tile that been made from wood as a model for footstep tile to give pressure to the piezoelectric transducers. This tile can be placed in the crowded area, walking pavement or exercise instruments. The electric energy that generates from this piezoelectric tile can be power up low power appliances.

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Dr. R. PALSON KENNEDY, M.E., Ph.D.,
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Certified that this project "MOBILE PHONE DETECTOR USING LM358" is the bonafide work of "NITHEESH A (411520105008), SRIKANTH G (411520105016), MOHAN R (411520105316), and THOMAS RICHARD M (411520105332)" who carried out the project work under my supervision.

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Now a days as the technology is improved, people are addicted to mobiles. They are at that stage where they are using and at what situation they are. There are some restricted places like hospitals, examination halls etc. To avoid that situation, we have designed a mobile detector circuit. This detector can sense the presence of and activated mobile phone from a distance of one and a half meter. So, it can be used to prevent use of mobile phone in examination halls, confidential rooms etc. It is also useful for detecting the use of mobile phone for spying and un authorized video transmission. The circuit can detect the incoming and outgoing calls, SMS and video transmission even if the mobile is kept in silent mode. It is built around CA3130 (IC1) and NPN transistor BC548 (T1). When a mobile phone is active, it radiates RF signal that passes through nearby space. The signal contains electromagnetic RF radiation from the phone. Capacitor C1 is used in the circuit to detect the RF signal from the mobile phone Carefully solder the capacitor in standing position with equal spacing of the leads. The response can be optimized by trimming the lead length of C3 for the desired frequency. You may use a short telescopic type antenna. Use the miniature 12V battery of a remote control and a small buzzer to make the gadget pocket-size. The unit will give the warning indication if someone uses Mobile phone within a radius of 1.5-2 meters.

Dr. R. PALSON KENNEDY, M.E., Fland.,
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BONAFIDE CERTIFICATE

Certified that this project "TRANSFORMER MONITORING USING ARDUINO" is the bonafide work of "KAVIKUMAR.M (411520105313), NIVETHA.S (411520105319), THIRSHA.M (411520105331), and VARSHINI. R (411520105333) "and who carried out the project work under my supervision.

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INTERNAL EXAMINER

EXTERNAL EXAMINER

Dr. R. PALSON KENNEDY, M.E., Ph.D.,
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1

To maintain the reliability in grid operation it is important to monitor real time transformer health. We know the importance of transformers in electricity distribution and transmission. They are the main components and constitute the sizable portion of capital investment of the distribution grid. Transformers are used for electricity distribution and transmission which decreases/increases the primary voltage to the utilization voltage for customer use. As distribution transformers are very costlier in electrical industry. Real time transformer health monitoring systems help to replace the equipment before failure and continuity of the power will not be disturbed. This project proposes a system for IOT remote monitoring of transformer. The information regarding transformer output voltage, current, power and available temperature will be transmitted wireless to a webserver through Internet. Here microcontroller IC ATMEGA 328p (Arduino) is used in this IC programming is done which continuously monitors the transformer operation parameters. It sends the acquired data to the user using NodeMCU 12E Wi-Fi module and also can receive command from the user for performing load shedding.

Dr. R. PALSON KENNEDY, M.E., Ph.D.,
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BONAFIDE CERTIFICATE

Certified that this project report titled "PV PANNEL BASED INTERLEAVED CONVERTER FOR ELECTRIC VEHICLE" is the bonafide work of VIGNESHWARAN.G (411520105017) ABISHEKSAMUEL.B (411520105301), GOKUL.S (411520105307), and RAJESH.S (411520105323) who carried out the project work under my supervision.

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INTERNAL EXAMINER

EXTERNALEXAMINER

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In this project, an examination of PV board based Interleaved converter for Electric vehicle charging is implemented. This framework comprises of sun powered cell battery, bidirectional dc -dc converter. A Battery is accommodated supply capacity to dc engine during no daylight condition. The bidirectional dc-dc converter is working in both charging and releasing the battery and can deal with the progression of force in both the bearing and henceforth overabundance energy from the PV board can be put away in battery. Affected by fluctuating irradiance and differing load conditions, the MPPT regulator extricates full power from the PV module. This proposed project is implemented using. This paper proposes a novel approach to improve the performance and efficiency of electric vehicle (EV) power conversion systems through the integration of a photovoltaic (PV) panel based interleaved converter. The aim is to utilize the available solar energy to supplement the battery power and increase the driving range of the EV. The proposed converter architecture consists of multiple interleaved DC-DC converters connected to a PV panel array. Each DC-DC converter operates at a high switching frequency, enabling efficient power transfer from the PV panel to the EV battery. The interleaved structure ensures reduced current ripple and enhanced power processing capability, resulting in improved overall system performance

Dr. R. PALSON KENNEDY, M.E., Ph.D.,
PRINCIPAL
PERI INSTITUTE OF TECHNOLOGY
Mannivakkam, Chennai - 600 048.

BONAFIDE CERTIFICATE

Certified that this project "STREAMLINED SMART HOME AUTOMATION USING INTERNET OF THINGS" is the bonafide work of KEERTHANA.V (411520105006), POOVARASAN.A (411520105010), ANURAMABARATHI.S (411520105302), MARIYAKALAI.P (411520105315), and who carried out the project work under my supervision.

SIGNATURE

MRS.S.L. SREEDEVI M.E. HEAD OF THE DEPARTMENT

Department of Electrical and Electronic Engineering

Peri Institute of Technology

Mannivakkam, Chennai-48

SIGNATURE

MR. ANTONYCHARLES ME. SUPERVISOR

Assistant Professor

Department of Electrical and Electronics engineering

Peri Institute of Technology

Mannivakkam, Chennai-48

Submitted for the VIVA-VOCE Examination held on 01 06 23

INTERNAL EXAMINER

EXTERNAL EXAMINER

Dr. R. PALSON KENNEDY, M.E., Ph.D.,
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Analog switches are mounted on the walls. Operating them is a tedious task as they need to be physically pressed each time an appliance has to be powered on or off. This hassle is replaced by a smart technique that involves operating the switches through a Web Browser of a Mobile phone or a PC. The present smart switches available in the market are very expensive and also require additional devices like hubs for their working. This paper uses the Cloud and a Web Browser to control the manually operated switches. A cloud server is created for the environment where the switches are mounted. The switches are interfaced with NodeMCU which has an inbuilt Wi-Fi. It can use this to enable or disable the switches. The user communicates with the processor through the Web Browser. The processor then controls the switches based on the commands received from the user and also updates the user about the status of the switches after the control operation is performed to the cloud. The intensity of light, the speed of the fan and other devices can be controlled using the Web Browser.

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AICTE Permanent ID Number: 1-5937291

REPORT ON PERI TECH EXPO 2023.

In the rapidly evolving landscape of the 21st century, the importance of promoting research and entrepreneurship among school students cannot be overstated. In order to encourage the students to explore the students their curiousity through research projects, PERI EDUCATION had decided to organize a state level inter school competition coined as **PERI TECH EXPO 2023**.

The crowning of champions in every domain was done during the valedictory function headed by our Honourable Chief guest Padmasri Dr. Mylswamy Annadurai, former director- Indian Space Research Organisation, Department of Space, Government of India and it was followed by Lighting the kuthuvilakku by the Chief guest and our honourable Chief operating officer Mr. Sasi Veerarajan and the principals of the Colleges under **PERI EDUCATION**.

An exclusive supporting team has been arranged to mentor the the schools to streamline the domains and categories. A total of 26 teams participated from 43 various schools along with our college students.









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AICTE Permanent ID Number: 1-5937291

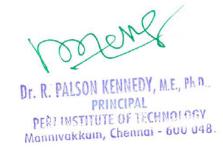








Student's project demonstration







ABVR Two Wheeler Honda Showroom and Service. Ellence Nagar, Vandigate. ChidambaramTaluk. Cuddalore District. Tamil Nadu - 608 001, India.

TO WHOMSOEVER IT MAY CONCERN

This is to certify that Mr.RAJESH G pursuing BE MECHANICAL - 3rd year student of PERI Institute of Technology, Mannivakkam, West Tambaram who had Successfully completed his internship of Service Training with us for 10 days from 3rd January 2023 to 12th January 2023. During his training, he was found attentive and punctual. We wish him all success for his future endeavors.

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1/2/01/2023

Dr. R. PALSON KENNEDY, M.E., Ph.D... PRINCIPAL

PERI INSTITUTE OF TECHNOLOGY Mannivakkain, Chennai - 600 048.



Date: 14 February 2023

Internship Approval

This is to Welcome "**Thaha Mohamed**", A Mechanical Engineering student from **Peri Institute of Technology**, for a three-month internship at HRM Info Services. The duration of the internship will be from February to April 2023.

Congratulations on reaching this most exciting stage in your life! In the next several weeks/months you will be working on the most fascinating projects in the organization. Yor role is to familiarize yourself with all the processes at the organization. Should spend significant amount of time in each department and learn in depth about the flow of work is like for the project.

We hope this internship training will be fruitful. We wish you all the success.

Note for Registration: Report to HR with College ID and Certificates on or before 15 February 2023.

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- +91 63744 85918
- No 5, Ponnappa street, Kilpauk , Chennai 600010

Regards
Hema Malini Parthasarathy
HR Director

www.hrminforservices.com



JOYSON ANAND ABHISHEK SAFETY SYSTEMS PVT. LTD. (Formerly known as TAKATA INDIA PVT.LTD.)

Survey No. 43/4, 215, Thenur Village, Ammanampakkam Post Chengalpattu Taluk, Chengalpattu District, Tamil Nadu - 603 003 India Tel: +91 44 27421312

24th September 2022

TO WHOMSOEVER IT MAY CONCERN

This is to certify that Mr. JEGATHISH K bearing Registration No. 221293, Pursuing BE Mechanical - 4th Year student of PERI Institute of Technology, Mannivakkam had completed his In-plant Training with us from 22nd September 2022 to 24th September 2022. During his training, he was found attentive and punctual.

We wish him all success in his future endeavors.

For Joyson Anand Abhishek Safety Systems Pvt. Ltd.

Senior Manager - HR & Admin.

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Survey No. 43/4, 215, Thenur Village, Ammanampakkam Post, Chengalpattu Takik, Chengalpattu District,

Tamil Nadu - 603 003 India Tel : +91 44 27421312

24th September 2022

TO WHOMSOEVER IT MAY CONCERN

This is to certify that Mr. AJAY MATHEW R bearing Registration No. 411519114302, Pursuing BE Mechanical — 4th Year student of PERI Institute of Technology, Mannivakkam had completed his In-plant Training with us from 22nd September 2022 to 24th September 2022. During his training, he was found attentive and punctual.

We wish him all success in his future endeavors.

For Joyson Anand Abhishek Safety Systems Pvt. Ltd.

R Surendar

Senior Manager - HR & Admin.

Dr. R. PALSON KENNEDY, M.E., Ph. C. PRINCIPAL

Monnyakkain, Chemiai - 800 048



(Formerly known as TAKATA INDIA FVT.LTD.)

Survey No. 43/4, 215, Thenur Village, Ammanampakkam Post Chengalpattu Taluk, Chengalpattu District,

Tamil Nadu - 603 003 India

24th September 2022

TO WHOMSOEVER IT MAY CONCERN

This is to certify that Mr. RAJESH G bearing Registration No. 411520114009, Pursuing BE Mechanical — 3rd Year student of PERI Institute of Technology, Mannivakkam had completed his In-plant Training with us from 22rd September 2022 to 24th September 2022. During his training, he was found attentive and punctual.

We wish him all success in his future endeavors.

For Joyson Anand Abhishek Safety Systems Pvt. Ltd.

R Surendar

Senior Manager - HR & Admin.

Dr. R. PALSON KENNEDY, M.E., Ph. D. PRINCIPAL

Mannivariation, Chennal - 800 048.



Survey No. 43/4, 215, Thenur Village, Ammanampakkam Post, Chengalpattu Taluk, Chengalpattu District, Tamil Nadu - 603 003 India Tel : *91 44 27421312

24th September 2022

TO WHOMSOEVER IT MAY CONCERN

This is to certify that Mr. C. TAMIL SELVAN bearing Registration No. 411520114017, Pursuing BE Mechanical — 3rd Year student of PERI Institute of Technology, Mannivakkam had completed his In-plant Training with us from 22nd September 2022 to 24th September 2022. During his training, he was found attentive and punctual.

We wish him all success in his future endeavors.

For Joyson Anand Abhishek Safety Systems Pvt. Ltd.

R Surendar

Senior Manager - HR & Admin.

Dr. R. PALSON KENNEDY, M.E., Ph.D.

PRINCIPAL

PER INSTITUTE OF TECHNOLOGY

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Tamil Nadu - 603 003 India Tel : +91 44 27421312

24th September 2022

TO WHOMSOEVER IT MAY CONCERN

This is to certify that Mr. N R ABINESH bearing Registration No. 411520114001, Pursuing BE Mechanical – 3rd Year student of PERI Institute of Technology, Mannivakkam had completed his In-plant Training with us from 22rd September 2022 to 24th September 2022. During his training, he was found attentive and punctual.

We wish him all success in his future endeavors.

For Joyson Anand Abhishek Safety Systems Pvt. Ltd.

R Surendar

Senior Manager - HR & Admin.

Dr. R. PALSON KENNEDY, M.E., Ph. D. PRINCIPAL

PER INSTITUTE OF TECHNOLOGY Manuvakkam, Chennai - 600 u48.



JOYSON ANANO ASSISSMEN SAPETY SYSTEMS PVT. LT. Formuly brown as TAKATA HOLD PVT.LTD.)

Survey No. 43/4, 216, Thener Village, Ammonocomposition Plant, Changelputty Taket, Changelputty District, Tamil Nactu - 603 002 Incla Tel: +01 44 27421512

11th October 2022

TO WHOMSOEVER IT MAY CONCERN

This is to certify that Mr. NAGACHARAN S bearing Registration No. 411519114305, Pursuing BE Mechanical — 4th Year student of PERI Institute of Technology. Mannivakkam had completed his In-plant Training with us from 7th October 2022 to 11th October 2022. During his training, he was found attentive and punctual.

We wish him all success in his future endeavors.

For Joyson Anand Abhishek Safety Systems Pvt. Ltd.

R Surendar

Senior Manager - HR & Admin.

Dr. R. PALSON KENNEDY, M.E., Ph.D..
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PED INSTITUTE OF TECHNOLOGY
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