Smt. Indira Gandhi College Of Engineering

(Approved By AICTE-New Delhi, DTE-M.S. & affiliated to University Of Mumbai)
(Plot No 1, Sector 8, Ghansoli, Navi Mumbai 400701)

"Renewable Energy Sources" Club
Of
Electrical Engineering Department
Is Organizing Seminar
On
" FPGA IMPLEMENTATION OF RNN FOR SOLAR INVERTERS "

Resource Person:- MR . CHANAKYA HINGU
(Research Assistant – Texas A&M University Kingsville &
University of Nevada Reno)

Event Date & Time :-
10/07/2024 (3:00 pm to 5:00 pm)

Students Coordinators:-
1) Mr Vinay Koshti
2) Mr Nikhil V Chavan
3) Ms Disha P Chalke
4) Mr Om Palata
5) Ms Vaishnavi Jadhav

Asst Prof.Ansari Mohd
(Club Incharge)

Prof N.B. Joshi
(H.O.D Electrical)

JNIESTRT'S
SMT. INDIRA GANDHI COLLEGE OF ENGINEERING
GHANSOLI, NAVI MUMBAI – 400 701
(Approved by AICTE New Delhi & Govt. of Maharashtra, Affiliated to University of Mumbai)
Electrical Engineering Department
"Renewable Energy Sources Club"

Index

Activity Title	Seminar on "**FPGA IMPLEMENTATION OF RNN FOR SOLAR INVERTERS**". (By Guest Speaker Mr. Chanakya Hingu)
Date : 10^{th} July 2024.	**Time : 3:00 P.M. – 5:00 P.M.**

Smt. Indira Gandhi College of Engineering

Plot No 1, Sector-08, Ghansoli, Navi Mumbai 400701.

Institute Vision & Mission

Vision

To serve and have a transformative impact on society by constantly pursuing excellence in technical education, innovation and entrepreneurship for human development with strong ethical values.

Mission

M1:- Serve and help transform society by graduating talented, broadly educated engineers equipped with state of art technology resources for developing sustainable solutions.

M2:- Academic excellence in science, engineering and technology through dedication to duty, commitment to research innovation in learning and faith in human values.

M3:- Cultivate the spirit of entrepreneurship and the connection between academia and industry that fosters problem solving through collaboration.

M4:- Enable the student to develop into outstanding professionals with high ethical standards capable of creating, developing and managing global engineering enterprises.

Smt. Indira Gandhi College of Engineering
Plot No 1, Sector-08, Ghansoli, Navi Mumbai 400701.
Electrical Engineering Department

Department Vision, Mission, PEO & PSO

Vision

- To mould socially committed, ethical and competent electrical engineers.

Mission

M 1 :- To provide conducive environment for teaching & learning.

M 2 :- To provide educational programs for improvement in academics and ethics.

M 3 :- To motivate students for participation in social & industrial activities.

Program Educational Objectives

PEO 1 :- To train students to identify, comprehend and solve the problems with creative and critical reasoning skills.

PEO 2 :- Be a practicing engineer in design, research, testing and manufacturing areas of electrical

PEO 3 :- To demonstrate leadership skill at workplace and act professionally in competitive world.

Program Specific Outcomes

Graduate will able to,

PSO 1 :- Understand concept and application of electrical machines, power systems and control system.

PSO 2 :- Assess performance of electrical system to maintain it's functioning.

PSO 3 :- Aspire to work in team to execute engineering activities in society.

Smt. Indira Gandhi College of Engineering

Plot No 1, Sector-08, Ghansoli, Navi Mumbai 400701.
Electrical Engineering Department

Program Outcome (POs)

Sr.No	Graduate Attribute	Program Outcome	Program Outcome
1	Engineering Knowledge	PO1	Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
2	Problem Analysis	PO2	Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusion using first principles of mathematics, sciences, and engineering sciences.
3	Design & Development Solutions	PO3	Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations
4	Investigation of Complex Problem	PO4	Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
5	Modern Tool Usage	PO5	Create, select, and apply appropriate techniques , resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.
6	Engineer & Society	PO6	Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
7	Environment & Sustainability	PO7	Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need of sustainable development.
8	Ethics	PO8	Apply ethical principles and commit to professional ethics and responsibilities and norms of engineering practice.
9	Individual & Team Work	PO9	Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
10	Communication	PO10	Communicate effectively in complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
11	Life long Learning	PO11	Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments
12	Project Management & Finance	PO12	Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

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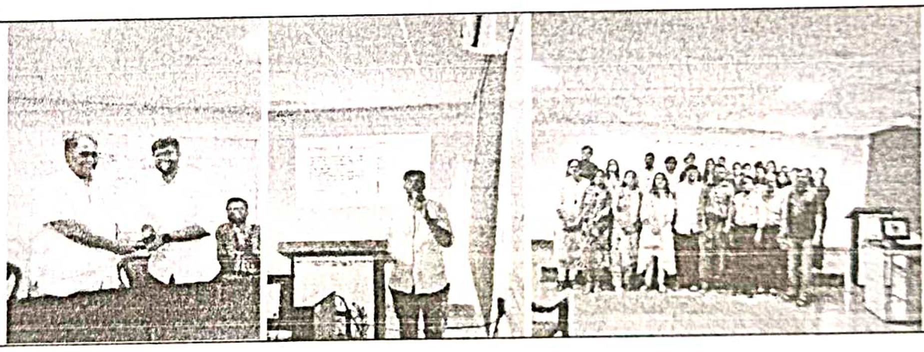
GHANSOLI, NAVI MUMBAI – 400 701
(Approved by AICTE New Delhi & Govt. of Maharashtra, Affiliated to University of Mumbai)
Electrical Engineering Department

Activity Title	Seminar on "FPGA IMPLEMENTATION OF RNN FOR SOLAR INVERTERS".
Date :10th July 2024.	Time : 3:00 P.M. – 5:00 P.M.
Delivery Mode (Offline)	3rd Floor Seminar Room.
Resource Persons	1.Mr. Chanakya Hingu (Guest Speaker) 2.Dr Sunil S Chavan (Principal) 3. Prof N.B.Joshi (H.o.D Electrical) 4. A.P Ansari Mohd Mubashshir (RES Club Incharge) 5. Mr Om Palata (RES Club Student Coordinator)
Participants	Electrical Engineering students & Teaching Staff.
Total Participants:	**56 students & 10 Faculty. (Male :- 42 , Female :- 24)**
Activity Outcome	1) Understand the PWM technique in solar inverter. 2) Generate PWM signal for solar inverter. 3) Understand the basic concept of FPGA & RNN for solar inverter. 4) Analyze the Implementation of RNN on Intel FPGA TR4 board. 5) Develop the hardware of solar inverter. 6) Testing & result validation of Solar inverter.
Feedback	The Seminar was very informative. We understood the importance of **"FPGA IMPLEMENTATION OF RNN FOR SOLAR INVERTERS"** & learn the concept of MPPT. **The overall success rate of the Seminar was 88.89 %.**
Photo	

24-07-24.

A.P. Ansari Mohd
(RES Club Incharge)

Prof N.B.Joshi
(HoD Electrical)

Dr .S. S. Chavan
(Principal)

Renewable Energy Sources Club

Date :- 08 / 07 / 2024.

From,

Electrical Engineering Students

(S.I.G.C.E.)

To,

Asst Prof. Ansari Mohd Mubashshir

Renewable Energy Sources Club Incharge

Subject :- Request to arrange Seminar on " Renewable Energy Sources" to enhance the technical knowledge.

Respected Sir,

We are writing this letter to inform you that, please arrange the seminar on "Renewable Energy Sources" to enhance the technical knowledge of the students. This seminar will be very useful to boost the technical knowledge of students & to abridge the gap between Academic course delivery & actual industrial implementation of these energy sources.

Hoping for your Kind response.

Thanking You,

OM B. Palata

omPalata

Vaishnavi N. Jadhav

Jadhav

Electrical Engineering Student

(S.I.G.C.E)

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SMT. INDIRA GANDHI COLLEGE OF ENGINEERING

GHANSOLI, NAVI MUMBAI – 400 701

(Approved by AICTE New Delhi & Govt. of Maharashtra, Affiliated to University of Mumbai)

Date:- 08/07/2024

To,
The Principal
Smt. Indira Gandhi College
of Engineering, Ghansoli.

From,
Ansari Mohd Mubashshir
Electrical Engineering Department,
RES Club Incharge.

Subject :- Permission to conduct Seminar on " **FPGA IMPLEMENTATION OF RNN FOR SOLAR INVERTERS**".

Respected Sir,

I "Ansari Mohd Mubashshir Mohd Yunus" am writing this letter to inform you that, electrical engineering department "Renewable Energy Sources Club" is willing to organize seminar on 10/07/2024 from 3:00 pm to 5:00 pm. The title of the seminar is " **FPGA IMPLEMENTATION OF RNN FOR SOLAR INVERTERS**" & the guest speaker is **MR. CHANAKYA HINGU** Research Assistant from Texas A&M University Kingsville & University of Nevada Reno.

I request you to please grant the permission of the seminar.

Proposed Date :- 10/07/2024.
Time :- 3:00 P.M. To 5:00 P.M.
Venue :- 3rd floor Seminar Room

Forwarded to Principal Sir for approval
08/07/24

08-07-24.

(Renewable Energy Sources Club Incharge)
(A.P. Ansari Mohd Mubashshir)

permission granted
08/07/24

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SMT. INDIRA GANDHI COLLEGE OF ENGINEERING

GHANSOLI, NAVI MUMBAI – 400 701

(Approved by AICTE New Delhi & Govt. of Maharashtra, Affiliated to University of Mumbai)

Date :- 08 / 07 / 2024.

NOTICE

All the electrical engineering students are hereby informed that, " **Renewable Energy Sources Club** " of electrical engineering department is arranging a Seminar **"FPGA IMPLEMENTATION OF RNN FOR SOLAR INVERTERS"** on **10 / 07 / 24, sharp at 3:00 P.M.** Interested students are requested to register for the seminar by scanning following Q.R. Code.

https://docs.google.com/forms/d/e/1FAIpQLScNfzjgxYY0GpbgfcdDjNUYJeVWKgz6kEM347QH4lkvmrmwdA/viewform?usp=sf_link

Last Date of Registration :- 10/07/2024.

Certificate will be awarded to all active participants.

Disha C.

(Ms. Disha Chalke)
(Student Co-ordinator)

08-07-24.

(Prof Ansari Mohd Mubashshir)
(Renewable Energy Sources Club Incharge)

Renewable Energy Club
SIGCE

Gmail

ANSARI MOHD. <mohd.ansari@sigce.edu.in>

Invitation for a Renewable Energy Sources (RES) Club Seminar.

1 message

ANSARI MOHD. <mohd.ansari@sigce.edu.in> Wed, Jul 10, 2024 at 1:26 PM

To: utkarsha.sonekar@sigce.edu.in, Chandra Shekhar Sir <chandrashekhar.chaudhari@sigce.edu.in>, "ANSARI MOHD." <mohd.ansari@sigce.edu.in>, SARIKA MATEY <sarika.matey@sigce.edu.in>, nishant.joshi@sigce.edu.in, Sandip Kotkar <sandip.kotkar@sigce.edu.in>, dnyaneshwar.gote@sigce.edu.in, arun.gawande@sigce.edu.in, shivanand.konade@sigce.edu.in, uday.pawar@sigce.edu.in, Alam Sir <mohd.alam@sigce.edu.in>

Respected Sir / Madam,

We are pleased to inform you that you are cordially invited to the seminar organized by the electrical engineering department's Renewable Energy Sources (RES) club on the topic of **"FPGA IMPLEMENTATION OF RNN FOR SOLAR INVERTERS"**.

The chief guest of the event is **"MR. CHANAKYA HINGU"** Research assistant at "University of Nevada", Reno . **The event will be held on 10th July 2024 from 3:00 pm to 5:00 pm in 3rd floor Seminar Hall.**

We are looking for your presence at the event.

Yours Sincerely,

—

Ansari Mohd Mubashshir Mohd Yunus
Assistant Professor
Electrical Engineering Department
S.I.G.C.E. (Ghansoli)

① M K Alam 10/07/24

② U. M. Sonekar 10/07/24

③ C. M. Chaudhari 10/07/24

④ N. B. Joshi 10/07/24

⑤ A N Gawande

⑥ V. V Pawar

⑦ Saila Matey

⑧ Ansari Mohd 10-07-24

Gmail

ANSARI MOHD. <mohd.ansari@sigce.edu.in>

Invitation for a Renewable Energy Sources (RES) Club Seminar.

1 message

ANSARI MOHD. <mohd.ansari@sigce.edu.in> Wed, Jul 10, 2024 at 1:25 PM
To: sunil.jadhav@sigce.edu.in, SUNIL CHAVAN <sunil.chavan@sigce.edu.in>, venkat.patil@sigce.edu.in, nishant.joshi@sigce.edu.in

Respected Sir,

We are pleased to inform you that you are cordially invited to the seminar organized by the electrical engineering department's Renewable Energy Sources (RES) club on the topic of "**FPGA IMPLEMENTATION OF RNN FOR SOLAR INVERTERS**".

The chief guest of the event is "**MR. CHANAKYA HINGU**" Research assistant at "University of Nevada", Reno . **The event will be held on 10th July 2024 from 3:00 pm to 5:00 pm in 3rd floor Seminar Hall.**

We are looking for your presence at the event.

Yours Sincerely,

Ansari Mohd Mubashshir Mohd Yunus
Assistant Professor
Electrical Engineering Department
S.I.G.C.E. (Ghansoli)

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SMT. INDIRA GANDHI COLLEGE OF ENGINEERING

GHANSOLI, NAVI MUMBAI – 400 701

(Approved by AICTE New Delhi & Govt. of Maharashtra, Affiliated to University of Mumbai)

Date:- 10/07/2024

To,
The Principal
Smt. Indira Gandhi College
of Engineering, Ghansoli.

From,
Ansari Mohd Mubashshir
Electrical engineering Department,
RES Club Incharge.

Subject :- 1) Permission to utilize 3rd floor seminar room on **10/07/2024 (3:00 PM to 5:00 PM)** for seminar **(FPGA IMPLEMENTATION OF RNN FOR SOLAR INVERTERS).**
2)To make provision of loudspeaker system.

Respected Sir,

I "Ansari Mohd Mubashshir Mohd Yunus" am writing this letter to inform you that, Electrical Engineering department "Renewable Energy Sources Club" is organizing seminar on 10/07/2024 from 3:00 pm to 5:00 pm. To conduct the seminar successfully we are having a requirement of seminar room & loudspeaker system.

I request you to please grant the permission to use 3rd floor seminar room & loudspeaker system for the said purpose.

Proposed Date :- 10/07/2024.
Time :- 3:00 P.M. To 5:00 P.M.
Venue :- 3rd floor Seminar Room

10-07-24.

(Renewable Energy Sources Club Incharge)
(A.P. Ansari Mohd Mubashshir)

Forwarded to Principal Sir for approval
10/07/24

Fwd to Hansraj
10/7/24

Permitted
10/07/2024

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Smt Indira Gandhi College of Engineering
Electrical Engineering Department
"Renewable Energy Sources" Club Detail
Academic Year 2024-25

Sr No	Name of Club	Name of faculty Incharge	Name of student Incharge & Teams		Institute email ID	contact No	Photo	Signature
1	Renewable Energy Sources Club	Prof M.M.Ansari	Event coordinator	VINAY JAGDISH KOSHTI	2021ee12f@sigce.edu.in	8828158341		
			Student coordinator	Om Palata	2022ee20f@sigce.edu.in	9820718060		
			Anchoring coordinator	Vaishnavi Navnath Jadhav	2022ee13f@sigce.edu.in	9967984605		
			Documentation coordinator	Nikhil Vilas Chavan	2021ee06f@sigce.edu.in	9324323925		
			Publicity coordinator	Chalke Disha Pandurang	2021ee04f@sigce.edu.in	9136346048		

"Renewable Energy Sources" Club

(Ansari Mohd Mubashshir)
(RES Club Incharge)

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SMT. INDIRA GANDHI COLLEGE OF ENGINEERING

GHANSOLI, NAVI MUMBAI – 400 701

(Approved by AICTE New Delhi & Govt. of Maharashtra, Affiliated to University of Mumbai)

Date :- 08/07/2024.

"Student Committee" for RES Club Seminar
On
"FPGA IMPLEMENTATION OF RNN FOR SOLAR INVERTERS"

Guest Speaker :- Mr. Chanakya Hingu from University of Nevada, Reno.

Proposed Date :- 10/07/24.

Time :- 3:00 P.M to 5:00 P.M.

Venue :- 3rd floor Seminar room. (313)

Sr.No	Name of Committee	Student Incharge	Signature
1	Reception	Ms. Chalke Disha Pandurang	
2	Anchoring	Ms. Vaishnavi Navnath Jadhav	
3	Feedback	Mr. Nikhil Vilas Chavan	
4	Certificate Distribution	Mr. Om Palata	
5	Media & photographic	Mr. Vinay Jagdish Koshti	
6	Documentation	Mr. Nikhil Vilas Chavan	

All the student incharges are requested to contact " Renewable Energy Sources Club Incharge" Prof Ansari Mohd to discuss & plan the seminar activity.

"Renewable Energy Sources" Club SIGCE

08-07-24.

(Prof Ansari Mohd Mubashshir)
(Renewable Energy Sources Club Incharge)

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SMT. INDIRA GANDHI COLLEGE OF ENGINEERING

GHANSOLI, NAVI MUMBAI – 400 701

(Approved by AICTE New Delhi & Govt. of Maharashtra, Affiliated to University of Mumbai)

Date :- 08/07/2024.

NOTICE

All the RES club students incharges are requested to attend the meeting on 08/07/2024 sharp at 4:00 pm in room number 220.

08-07-24.

(Prof Ansari Mohd Mubashshir)
(Renewable Energy Sources Club Incharge)

1. Om Palata - OmPalata
2. Vaishnavi Jadhav -
3. Chalke Disha Pandurang -
4. Nikhil. Vilas. Chavan -
5. Vinay. Jagdish. Koshti -

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GHANSOLI, NAVI MUMBAI – 400 701

(Approved by AICTE New Delhi & Govt. of Maharashtra, Affiliated to University of Mumbai)

Minutes of Meeting

RES Club Meeting Date:- 08/07/2024
Location :- Room No 220.
Time :- 4:00 pm to 4:30 pm

The following members were present,

Sr.No	Student Incharge	Signature
1	Mr. Vinay Jagdish Koshti	Vinay
2	Mr. Om Palata	OmPalata
3	Ms. Vaishnavi Navnath Jadhav	[illegible]
4	Mr. Nikhil Vilas Chavan	[illegible]
5	Ms. Chalke Disha Pandurang	[illegible]

1) Ms. Chalke Disha & Ms. Vaishnavi Jadhav will take care of reception & anchoring.
2) Mr. Om Palata will circulate the attendance sheet in seminar room & handover it to Asst. Prof Ansari at the end of seminar.
3) Mr. Nikhil Vilas Chavan will write the name of participant on certificate & handover the entire document to Prof Ansari Mohd.
4) Mr. Nikhil Vilas Chavan will take the signature of participant on the "Certificate record sheet" & will distribute the certificate.
5) Mr. Vinay Jagdish Koshti will assist Asst Prof. Ansari Mohd for quiz & feedback response collection through google form.
6) Mr. Vinay Jagdish Koshti will take the photograph of the event and shared with me through google drive.
7) Mr. Nikhil Vilas Chavan will assist me in preparing the seminar documentation.
8) Mr. Vinay Jagdish Koshti will prepare the Schedule of the seminar.

(Prof Ansari Mohd Mubashshir)
(Renewable Energy Sources Club Incharge)

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SMT. INDIRA GANDHI COLLEGE OF ENGINEERING

GHANSOLI, NAVI MUMBAI – 400 701

(Approved by AICTE New Delhi & Govt. of Maharashtra, Affiliated to University of Mumbai)

Date:- 08/07/2024

Budget of Seminar

On " FPGA IMPLEMENTATION OF RNN FOR SOLAR INVERTERS"

Sr.No	Committee	Description	Budget
1	Account & Finance	Guest Remuneration (Including TA)	2000/-
2	Media & photographic	Event Photos 10*10	100/-
3	Documentation	Report binding	50/-
4	Certificate Distribution	Certificate (Expected Participant 100)	1000/-
5	Reception	Bouquet & guest refreshment	~~600/-~~
	TOTAL		**3750/-**

Please sanction the above said amount for successful & smooth conduction of seminar.

ok
Approved
08/07/24

Guest Speaker :- MR . CHANAKYA HINGU (Research Assistant – Texas A&M University Kingsville & University of Nevada Reno)

Proposed Date :- 10/07/2024.

Time :- 3:00 P.M. To 5:00 P.M.

Venue :- 3rd floor Seminar Room

Forwarded to Principal for approval
08/07/24

08-07-24.

(Renewable Energy Sources Club Incharge)
(A.P. Ansari Mohd Mubashshir)

"Renewable Energy Sources" Club

RES Club Seminar "Student Registration form" 2024-25

Seminar Arranged by "Renewable Energy Sources Club" of Electrical Engineering Department.

* Indicates required question

1. Email *

2. Name of Participant *

3. Mobile Number *

4. Gender *

Mark only one oval.

( ) Male

( ) Female

5. Branch *

Mark only one oval.

- SE / Electrical / Sem-III
- TE / Electrical / Sem-V
- BE / Electrical / Sem-VII
- Faculty

6. Name of College *

7. Email ID *

8. I will attend the RES Club Seminar **" FPGA IMPLEMENTATION OF RNN FOR SOLAR INVERTERS "** on 10/07/2024 sharp from 3:00 PM to 5:00 PM. *

Mark only one oval.

- YES
- NO

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Google Forms

SMT. INDIRA GANDHI COLLEGE OF ENGINEERING

Student Registered for

"Renewable Energy Sources Club" Seminar

For Academic Year 2024-25

S.No	Name of Participant	Email Address	Mobile Number
1	Bhavana Sandeep Dhamankar	2022ee04f@sigce.edu.in	9892089025
2	Om Palata	2022ee20f@sigce.edu.in	9820718060
3	Aayush Dwivedi	2022ee05f@sigce.edu.in	9082961274
4	Hrutuja Shriram Gurav	2023ee49d@sigce.edu.in	9152069945
5	Sayli Anandrao Patil	2022ee22f@sigce.edu.in	8108791388
6	Tanvi Ananda Parte	2022ee21f@sigce.edu.in	8108617606
7	Ritesh jadhav	2022ee12f@sigce.edu.in	9137748573
8	Barhate Piyush Dinkar	2023ee39d@sigce.edu.in	9324920917
9	Ansari Mohd Mubashshir Mohd Yunus	mohd.ansari@sigce.edu.in	9892806910
10	Vaishnavi Navnath Jadhav	2022ee13f@sigce.edu.in	9967984605
11	Dhananjay Rayate	2023ee64d@sigce.edu.in	9004529704
12	Vishalakshi More	2022ee18f@sigce.edu.in	9920554273
13	Srushti Patil	2023ee62d@sigce.edu.in	9970022840
14	Mahesh vinod patil	2022ee65d@sigce.edu.in	8928167448
15	Nilesh Jinaga	2022ee50d@sigce.edu.in	9833096285
16	BHUPEN N UMREDKAR	2022ee84d@sigce.edu.in	9127978510
17	Rohit .K. Gavit	2021ee08f@sigce.edu.in	9322963484
18	VINAY JAGDISH KOSHTI	2021ee12f@sigce.edu.in	8828158341
19	Shreyas Dayanand Sawant	2023ee66d@sigce.edu.in	9420962649
20	Hrithik Soni	2023ee72d@sigce.edu.in	9619465454
21	Shivam Rajendra Yadav	2022ee33f@sigce.edu.in	9930401088
22	Swati Sonawane	2022ee80d@sigce.edu.in	9860939690
23	Vaibhav Sakharam Shinde	2021ee19f@sigce.edu.in	8263827184
24	Nikhil Vilas Chavan	2021ee06f@sigce.edu.in	9324323925
25	Vaibhavi Ajay Taras	2022ee81d@sigce.edu.in	8087562251
26	Satishkumar gupta	2023ee48d@sigce.edu.in	8369919994
27	Kaustubh Pawar	2022ee67d@sigce.edu.in	8879436297
28	Snigdha Sanjay Kadam	2023ee52d@sigce.edu.in	9819691919
29	Akash Vishwas Mane	2023ee56d@sigce.edu.in	8433615129
30	ATHARV RAJESH POL	2022ee71d@sigce.edu.in	8169185343
31	Yash Charatkar	2022ee39d@sigce.edu.in	8169615693
32	Yash Rakesh Wagh	2023ee75d@sigce.edu.in	8177822408
33	Jay Nandkumar Patil	2023ee61d@sigce.edu.in	9325819096
34	Bhumika Ankush Raut	2022ee23f@sigce.edu.in	8928615458
35	TEJAS MILIND TALEKAR	2022ee28f@sigce.edu.in	9136713435

Om Palata

(Mr Om Palata)

(RES Club Coordinator)

"Renewable Energy Sources" Club

(A.P. Ansari Mohd Mubashshir)

(RES Club Incharge)

SMT. INDIRA GANDHI COLLEGE OF ENGINEERING

Student Registered for

"Renewable Energy Sources Club" Seminar

For Academic Year 2024-25

S.No	Name of Participant	Email Address	Mobile Number
36	Ashish more	2023ee58d@sigce.edu.in	7400231164
37	Vedant Bharat churi	2023ee44d@sigce.edu.in	9765573470
38	ATHARVA NARENDRA KHANDER	2023ee53d@sigce.edu.in	8657663812
39	Shravastee Thakur	2022ee29f@sigce.edu.in	8692990694
40	Shaina durgappa chavan	2022ee03f@sigce.edu.in	9326202927
41	Kiran Ramkishan Muknar	2023ee59d@sigce.edu.in	9324195094
42	Kaushik parshuram gawade	2022ee06f@sigce.edu.in	7208621656
43	Aminisha Kamalakar Natekar	2020ee17f@sigce.edu.in	7028509182
44	Chaitanya Bharat Randhe	2022ee74d@sigce.edu.in	8369034948
45	Namita Narayankar	2022ee60d@sigce.edu.in	9136544948
46	Bhadane Heemanshi Sudhakar	2023ee40d@sigce.edu.in	9067856047
47	Nikita Nitin Bhosale	2023ee42d@sigce.edu.in	9967060997
48	Onkar Rajendra Chavan	2023ee43d@sigce.edu.in	7045242804
49	Yash Nitin Bagul	2023ee38d@sigce.edu.in	8767024611
50	VINEET BHADRA	2022ee01f@sigce.edu.in	9768951277
51	SUMIT KAUSHAL	2022ee17f@sigce.edu.in	9082684450
52	Omkar Vinod Mali	2023ee55d@sigce.edu.in	8652430560
53	Soham Patole	2023ee63d@sigce.edu.in	9969900006
54	Aniket Bhandkoli	2023ee41d@sigce.edu.in	8080266591
55	Janhavi Kadu	2022ee14f@sigce.edu.in	7385068122
56	Vinayak Naresh Shinde	2023ee70d@sigce.edu.in	7028591279
57	Deep Laxman Satam	2023ee65d@sigce.edu.in	8928502172
58	Mayur Savkar Davkhar	2021ee07f@sigce.edu.in	9321682668
59	Vipul T Koyande	2021ee13f@sigce.edu.in	7977810097
60	Pawan Anilkumar Prajapati	2022ee72d@sigce.edu.in	7304763297
61	Komal Gajanan Palve	2022ee62d@sigce.edu.in	8080238031
62	Atharva Suhas More	2023ee15f@sigce.edu.in	9326420276
63	Avantika Pol	2023ee23f@sigce.edu.in	7039722750
64	Kunal Devendra Patil	2023ee21f@sigce.edu.in	7208850522
65	S LIPSA REDDY	2023ee27f@sigce.edu.in	8879344857
66	Vivek Vilas Dhaygude	2023ee04f@sigce.edu.in	9137452359
67	Sahil Santosh Mohite	2023ee14f@sigce.edu.in	8591293107
68	Sangram jadhav	2023ee08f@sigce.edu.in	8169177975
69	Nagaraj Bhimashankar Ambalgi	2023ee01f@sigce.edu.in	9967872715
70	Ashirwad Balkrishna More	2022ee59d@sigce.edu.in	9324354722

OmPalata

(Mr Om Palata)

(RES Club Coordinator)

"Renewable Energy Sources" Club SIGCE

(A.P. Ansari Mohd Mubashshir)

(RES Club Incharge)

SMT. INDIRA GANDHI COLLEGE OF ENGINEERING

Student Registered for

"Renewable Energy Sources Club" Seminar

For Academic Year 2024-25

S.No	Name of Participant	Email Address	Mobile Number
71	Samarth Rane	2023ee26f@sigce.edu.in	7208744869
72	Alchrist Anthony	2022ee34d@sigce.edu.in	8169954244
73	Anushree Deepak Thakur	2023ee34f@sigce.edu.in	8983588327
74	Manasvi More	2023ee16f@sigce.edu.in	9702434399
75	Meet Bhatt	2022ee38d@sigce.edu.in	8169234066
76	Omkar sutar	2023ee32f@sigce.edu.in	8369679040
77	Nishant B Joshi	nishant.joshi@sigce.edu.in	9892485790
78	Ramkrushna Nathaji Fasale	2022ee46d@sigce.edu.in	9561357166
79	MOHD KHURSHEED ALAM	mohd.alam@sigce.edu.in	9833367075
80	C M Chaudhari	chandrashekhar.chaudhari@sigce.edu.in	9819428690
81	A.N.Gawande	arun.gawande@sigce.edu.in	9224097312
82	Utkarsha pawar	utkarsha.sonekar@sigce.edu.in	9356414014
83	Udaysingh V. Pawar	uday.pawar@sigce.edu.in	7738409531
84	Sarika Sandeep Matey	sarika.matey@sigce.edu.in	9769782778
85	Sangita Nitin Chaudhari	sangita.chaudhari@sigce.edu.in	9867915264
86	Tushar shinde	2022ee27f@sigce.edu.in	9867632216
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OmPalata

(Mr Om Palata)

(RES Club Coordinator)

Renewable Energy Sources Club SIGCE

(A.P. Ansari Mohd Mubashshir)

(RES Club Incharge)

SMT. INDIRA GANDHI COLLEGE OF ENGINEERING

REF.: SIGCE / EST / 02/2024-25

Date:-08-07-2024

To,
MR. CHANAKYA HINGU
Research Assistant,
University of Nevada, Reno.

Respected Sir,

Established in 1993, Smt. Indira Gandhi College of Engineering (SIGCE), managed by Jawaharlal Nehru Institute of Education Science and Technological Research Trust, Nanded, remains committed to world class technology-focused education.

With great contentment and delight we would like to inform you that, "Renewable Energy Sources Club" of "Smt. Indira Gandhi College of Engineering", Ghansoli is organizing a seminar on **"FPGA IMPLEMENTATION OF RNN FOR SOLAR INVERTERS"** to enrich technical knowledge of students.

The objective of the seminar is to abridge the gap between academic course delivery & actual industrial implementation of these energy sources.

We will be honored to have you as a Expert Speaker. Kindly acknowledge your willingness and availability (Tentative Date is 10/07/2024 & Time is 3:00 pm to 5:00pm) for the conduction of program.

Your cooperation in this respect will go a long way to make the Training Program a grand success.

With Best Regards.

Principal

Principal
Smt. Indira Gandhi College of Engineering
Plot No 1, Sector-08,
Ghansoli, Navi Mumbai-400701.

Smt. Indira Gandhi College of Engineering
Ghansoli
Navi Mumbai

chanakya Hingu
Hingu
08/07/2024

CHANAKYA HINGU

linkedin.com/in/chanakya-hingu |chingu@nevada.unr.edu | (361) 488-8191

EDUCATION

Texas A&M University Kingsville & University of Nevada Reno 2022-present
PhD – Electrical Engineering
Power electronics and FPGA implementation of Neural Networks

Texas A&M University – Kingsville 2022
Master of Science – Electrical Engineering GPA 3.77
Relevant Coursework: Semiconductor Fundamentals, Digital Signal Processing, Computer Architecture, VLSI Design, Analysis of Algorithm, Adaptive Control

University of Mumbai – Smt. Indira Gandhi College of Engineering October 2020
Bachelor of Engineering – Electrical Engineering

TECHNICAL EXPERTISE

Programing Languages: Verilog, System Verilog, VHDL, C++(basics), OOPS (basics), Assembly Language, Perl, Tcl. **Software& Skills:** Code Composer Studio (CCS), Model Sim, Quartus Prime, Altera, Cadence Virtuoso, Cadence, SPICE, PCB, MATLAB, Simulink, Microsoft Office, Xilinx, COMSOL, FPGA development, SoC, ASIC design, RTL design, Analog IC design, STA, CAD (computer Aided Design), LabView, System Verilog, Verification.

PROFESSIONAL EXPERIENCE

Research Assistant – Texas A&M University Kingsville & University of Nevada Reno January 2022 – Present

FPGA implementation of Recurrent Neural Network

- Conceptualized, designed, and successfully implemented a sophisticated activation function using Intel Quartus Prime software, contributing to the optimization of neural network operations.
- Executed the complete deployment of a complex Recurrent Neural Network (RNN) on Intel FPGA, seamlessly integrating Altera floating point blocks within the Quartus Prime environment. Conducted comprehensive simulations to validate performance and functionality.
- Demonstrated versatility by designing, implementing, and simulating an RNN utilizing a precision-fixed point methodology in MATLAB, followed by rigorous simulation within the Intel Quartus Prime software ecosystem.
- Currently leading a cutting-edge project focused on the synergistic integration of a Texas Instruments Solar Microinverter with FPGA technology. The goal is to achieve a seamless and optimized operational framework, further underlining my commitment to innovation and interdisciplinary collaboration.

Hardware Hardening of Texas Instrument Microcontroller

- Researched and optimized solar microinverters using Texas Instruments (TI) platform.
- Modified PWM code in CCS to generate adjustable duty cycles for solar microinverters.
- Conducted comparative analysis on transient responses of LCL filter in DC-AC inverter of two TI solar inverter boards.
- Utilized TI Control Suite for efficient development and testing.
- Enhanced energy conversion efficiency through optimized PWM duty cycle settings.
- Documented procedures and results for comprehensive reporting.
- Proficient in Code Composer Studio (CCS) and TI Control Suite.

Graduate Projects

17-Stage Ring Oscillator circuit using CMOS with an Impedance Matching Circuit November 2021 – December 2021

- Developing a 17-transistor stage oscillator circuit using CMOS inverter to produce a signal at 3GHz frequency that feeds into the antenna.
- Design of an impedance matching circuit to efficiently connect oscillator to the antenna.
- Modeled the response of the complete circuit in SPICE.

Design of an 8 Bit Ripple Carry Adder February 2021

- Customized Circuit design of an 8-bit Ripple Carry Adder for IBM 0.25-micron technology.
- Physical design, debugging, and extraction of the block-level custom layouts using **Magic** tool.
- Study the device performance using **SPICE** for Power and Delay

PUBLICATIONS

- A Novel Weight Dropout Approach to Accelerate the Neural Network Controller Embedded Implementation on FPGA for a Solar Inverter, *2023 IEEE International Conference on Smart Computing (SMARTCOMP),* Nashville, TN, USA, 2023, pp. 157-163, doi: 10.1109/SMARTCOMP58114.2023.00037
- FPGA Acceleration of a Real-time Neural Network Controller for Solar Inverter, *2022 IEEE 13th Annual Ubiquitous Computing, Electronics & Mobile Communication Conference (UEMCON)*, New York, NY, NY, USA, 2022, pp. 0413- 0420, doi: 10.1109/UEMCON54665.2022.9965651.
- VHDL Schematic Design and FPGA Simulation of Neural Network Activation Function using Continued Fractions, *2022 IEEE 13th Annual Ubiquitous Computing, Electronics & Mobile Communication Conference (UEMCON)*, New York, NY, NY, USA, 2022, pp. 0469-0474, doi: 10.1109/UEMCON54665.2022.9965710.

JNIESTRT

Smt. Indira Gandhi College of Engineering

Estd. : 1993-94

(Approved by AICTE New Delhi & Govt. of Maharashtra,
Affiliated to University of Mumbai)

SCHEDULE

of

***Seminar On* "FPGA IMPLEMENTATION OF RNN FOR SOLAR INVERTERS"**

Date: 10th-July 2024 *Venue :* 3rd floor Seminar Room *Time:* 3:00 P.M to 5:00 PM Academic Year:2024-25

Date	Day	Activity	Resource Person	Timing
10/07/24	Wednesday	Function Inauguration By Principal, Vice Principal & H.oD.	Dr Sunil S Chavan Prof N. B. Joshi	3:00 PM to 3:10 PM
		Saraswati Vandana		
		Inauguration speech by Principal		
		Introduction of "Renewable Energy Sources Club"	Asst Prof Ansari Mohd	3:10 PM to 3:15 PM
		1. PWM authentication of PCBs in solar inverter 2. Transient response analysis of inverters 3. FPGA details 4. RNN introduction	Mr. Chanakya Hingu	3:15 PM to 4:00 PM
		5. Floating point and fix point of RNN implementations 6. FPGA implementation of RNN 7. Hardware deployment	Mr. Chanakya Hingu	4:00 PM to 4:30 PM
		Feedback Session & Quiz session	Asst Prof Ansari Mohd	4:30 PM to 4:50 PM
		Vote of thanks & Closing Ceremony	H.o.D Electrical	4:50 PM to 5:00 PM

(Mr Vinay Koshti)
(RES Club Coordinator)

(Asst Prof Ansari Mohd Mubashshir)
(Renewable Energy Sources Club I/C)

"Renewable Energy Sources" Club SIGCE

(Prof N.B. Joshi)
(H.o.D Electrical)

SMT. INDIRA GANDHI COLLEGE OF ENGINEERING

Student Attendance Record of Seminar on

"FPGA IMPLEMENTATION OF RNN FOR SOLAR INVERTERS"

Date :- 10/07/2024 Time:- 3:00 P.M to 5:00 P.M.

S.No	Name of Participant	Mobile Number	Signature
1	Aayush Dwivedi	9082961274	Aayush.D
2	Kaushik P. Gawade	7208621656	
3	Tushar S. Shinde	9867632216	
4	Vineet Bhadra	9969951277	
5	Onkar Chavan	7045242804	Onkar
6	Aniket B. Bhandkoli	8080266591	
7	Atharva M. Khandinao.	8657663816	
8	Nikita Nitin Bhosale	9967060997	
9	Ritesh Rajendra Jadhav	9137748573	
10	Piyush Dinkar Bahate	9324920917	
11	Kiran Ramkishan Mukhar	9324195094	
12	Bhadane Heemanshi Sudhakar	9067856047	
13	Janhavi Dnyaneshwar Kadu	[illegible]	
14	Sayli Anandrao Patil	8108791388	
15	Bagul Yash Nitin	8767024611	
16	Sumit Kaushal	9082684450	
17	Jay Patil	9325819096	
18	Srushti Patil	9970022840	Patil
19	Shravastee Thakur	8692990694	
20	Hrutuja S. Gurav	9152069945	Gurav
21	Snigdha Kadam	9819691919	
22	Bhavana Dhamankar	9892089025	Bhavana
23	AMINISHA K NATEKAR	7028509182	Aminisha
24	DISHA P CHALKE	9136346048	
25	ROHIT GAVIT	9322963484	Rohit
26	NIKHIL CHAVAN	9324323925	Nikhil
27	~~VAISHNAVI JHADHAV~~ VAISHNAVI JADHAV	9967984605	
28	Om Palata	9820718060	omPalata
29	Vinay Koshti	8828158341	
30	Meet Bhatt	8169234066	
31	Atharv R. Pol	8169185343	
32	Ashish More	7400231164	

omPalata

(Mr Om Palata)

(RES Club Coordinator)

"Renewable Energy Sources" Club

(A.P. Ansari Mohd Mubashshir)

(RES Club Incharge)

SMT. INDIRA GANDHI COLLEGE OF ENGINEERING

Student Attendance Record of Seminar on

"FPGA IMPLEMENTATION OF RNN FOR SOLAR INVERTERS"

Date :- 10/07/2024 Time:- 3:00 P.M to 5:00 P.M.

S.No	Name of Participant	Mobile Number	Signature
33	Kunal Devendra Patil	7208850522	Patil
34	Nagaraj Bhimashankar Ambalgi	9967872715	
35	Sangram Jadhav	8169177975	
36	Vivek Dahiygude	9137452359	Vivek
37	Avantika Pol	7039722790	
38	S Lipsa Reddy	8879244851	
39	Manasvi More	9702434399	
40	Anushree Thakur	8433583327	
41	Shubham Sonawane	8779925251	Sonawane
42	Tanvi Paste	8108617606	Tpaste
43	Bhumika Raut	8928615458	
44	Vishalakshi More	9920554273	V.More
45	N B Joshi	9892485790	
46	Ansari Mohd	9892806910	
47	Prof. M. K. Alam	9833367075	
48	Prof A N Gawande	9224097312	
49	Prof. C.M. Chaudhari	9819428600	
50	Mrs. Sangita Chaudhari	9867915264	
51	Prof. Utkarsha Pawar	9356414014	
52	Prof Udaysinh V. Pawar	7738409531	
53	Chandrakant Bamane	8879125801	
54	Sarita Mestry	9769978280	
55	Akash Mane	8433615129	
56	Shreyas Sawant	9420912649	Ssawant
57	Deep Sutam	8928502172	
58	Vaibhavi Taras	8087562251	VTaras
59	Shivam Rajendra Yadav	9930401088	Shivamydv
60	Shaina Chavan	9326202927	Chavan
61	Rohit Gadhe	7045006128	Rohit Gadhe
62	Aniket Jadhav	8329881133	Aniketj
63	Vinayak Shinde	7028591279	V.Shinde
64	Suyog Ghadi	9833270346	Suyog
65	Satish Gupta	8369919994	Satish

OmPalata

(Mr Om Palata)
(RES Club Coordinator)

"Renewable Energy Sources" Club

(A.P. Ansari Mohd Mubashshir)
(RES Club Incharge)

SMT. INDIRA GANDHI COLLEGE OF ENGINEERING

Student Attendance Record of Seminar on

"FPGA IMPLEMENTATION OF RNN FOR SOLAR INVERTERS"

Date :- 10/07/2024

Time:- 3:00 P.M to 5:00 P.M.

S.No	Name of Participant	Mobile Number	Signature
66	Samarth Rane	7208744869	Rane
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omPalata

(Mr Om Palata)

(RES Club Coordinator)

"Renewable Energy Sources" Club

(A.P. Ansari Mohd Mubashshir)

(RES Club Incharge)

SMT. INDIRA GANDHI COLLEGE OF ENGINEERING

Certificate Issued Record of

Seminar on "FPGA IMPLEMENTATION OF RNN FOR SOLAR INVERTERS"

Date :- 10/07/2024 Time:- 3:00 P.M. to 5:00 P.M.

S.No	Name of Participant	Gender	Total Score obtained (20)	Percent of Score	Certificate ID
1	More Vishalakshi Baburao	Female	14	70.0%	TZJP98-CE000001
2	Ashish more	Male	12	60.0%	TZJP98-CE000004
3	Sangram jadhav	Male	10	50.0%	TZJP98-CE000005
4	ATHARVA NARENDRA KHANDERAO	Male	18	90.0%	TZJP98-CE000006
5	Om Bishnu Palata	Male	12	60.0%	TZJP98-CE000007
6	Vaibhavi Ajay Taras	Female	8	40.0%	TZJP98-CE000008
7	MEET VIJAY BHATT	Male	14	70.0%	TZJP98-CE000009
8	VINAY JAGDISH KOSHTI	Male	16	80.0%	TZJP98-CE000010
9	Kunal Devendra Patil	Male	18	90.0%	TZJP98-CE000011
10	Onkar Rajendra Chavan	Male	20	100.0%	TZJP98-CE000012
11	ATHARV RAJESH POL	Male	20	100.0%	TZJP98-CE000013
12	Rohit. K. Gavit	Male	18	90.0%	TZJP98-CE000014
13	Nikhil Vilas Chavan	Male	20	100.0%	TZJP98-CE000015
14	Nagaraj Bhimashankar Ambalgi	Male	16	80.0%	TZJP98-CE000016
15	Avantika Ganesh Pol	Female	12	60.0%	TZJP98-CE000017
16	S LIPSA RAVINDRA REDDY	Female	12	60.0%	TZJP98-CE000018
17	Tushar shinde	Male	20	100.0%	TZJP98-CE000019
18	Hrutuja Shriram Gurav	Female	20	100.0%	TZJP98-CE000020
19	Bhadane Heemanshi Sudhakar	Female	20	100.0%	TZJP98-CE000021
20	Srushti Patil	Female	18	90.0%	TZJP98-CE000022
21	Shravastee thakur	Female	18	90.0%	TZJP98-CE000023
22	Snigdha Sanjay Kadam	Female	20	100.0%	TZJP98-CE000024
23	Chalke Disha Pandurang	Female	16	80.0%	TZJP98-CE000025
24	Vaishnavi Navnath Jadhav	Female	20	100.0%	TZJP98-CE000026
25	Nikita Nitin Bhosale	Female	20	100.0%	TZJP98-CE000027
26	Sayli Anandrao Patil	Female	20	100.0%	TZJP98-CE000028
27	Barhate Piyush Dinkar	Male	20	100.0%	TZJP98-CE000029
28	Bhavana Sandeep Dhamankar	Female	18	90.0%	TZJP98-CE000030
29	VINEET BHADRA	Male	18	90.0%	TZJP98-CE000031
30	Kaushik parshuram gawade	Male	20	100.0%	TZJP98-CE000032
31	Sumit Kaushal	Male	20	100.0%	TZJP98-CE000033
32	Yash Nitin Bagul	Male	20	100.0%	TZJP98-CE000034

(Mr Nikhil Chavan)
(RES Club Coordinator)

(A.P. Ansari Mohd Mubashshir)
(RES Club Incharge)

Renewable Energy Sources Club
SIGCE

SMT. INDIRA GANDHI COLLEGE OF ENGINEERING

Certificate Issued Record of

Seminar on "FPGA IMPLEMENTATION OF RNN FOR SOLAR INVERTERS"

Date :- 10/07/2024 Time:- 3:00 P.M. to 5:00 P.M.

S.No	Name of Participant	Gender	Total Score obtained (20)	Percent of Score	Certificate ID
33	Aminisha Kamalakar Natekar	Female	20	100.0%	TZJP98-CE000035
34	Manasvi Dinesh More	Female	10	50.0%	TZJP98-CE000036
35	Kiran ramkishan muknar	Male	20	100.0%	TZJP98-CE000037
36	Aayush Dwivedi	Male	18	90.0%	TZJP98-CE000038
37	Suyog Sudhakar Ghadi	Male	20	100.0%	TZJP98-CE000039
38	Ritesh Rajendra jadhav	Male	20	100.0%	TZJP98-CE000040
39	Vinayak Naresh Shinde	Male	20	100.0%	TZJP98-CE000041
40	Rohit Gadhe	Male	18	90.0%	TZJP98-CE000042
41	Aniket Bhandkoli	Male	16	80.0%	TZJP98-CE000043
42	Shubham sonawane	Male	18	90.0%	TZJP98-CE000044
43	Jay Nandkumar Patil	Male	20	100.0%	TZJP98-CE000045
44	Vivek Vilas Dhaygude	Male	18	90.0%	TZJP98-CE000046
45	Aniket jadhav	Male	16	80.0%	TZJP98-CE000047
46	Satishkumar gupta	Male	14	70.0%	TZJP98-CE000048
47	Shivam Rajendra Yadav	Male	18	90.0%	TZJP98-CE000049
48	Shreyas Dayanand Sawant	Male	18	90.0%	TZJP98-CE000050
49	Akash Vishwas Mane	Male	18	90.0%	TZJP98-CE000051
50	Samarth Sanjay Rane	Male	20	100.0%	TZJP98-CE000052
51	Ansari Mohd Mubashshir Mohd Yunus	Male	20	100.0%	TZJP98-CE000053
52	Shaina durgappa chavan	Female	18	90.0%	TZJP98-CE000054
53	Deep Laxman Satam	Male	20	100.0%	TZJP98-CE000055
54	Mohd Khursheed Alam	Male	10	50.0%	TZJP98-CE000056
55	Chandrashekhar Chaudhari	Male	20	100.0%	TZJP98-CE000057
56	Sarika Sandeep Matey	Female	10	50.0%	TZJP98-CE000058
57	Anushree Deepak Thakur	Female	16	80.0%	TZJP98-CE000059
58	Pawar Udaysinh V.	Male	16	80.0%	TZJP98-CE000060
59	Sangita Nitin Chaudhari	Female	18	90.0%	TZJP98-CE000061
60	Chandrakant Shankar Bamane	Male	16	80.0%	TZJP98-CE000062
61	Utkarsha pawar	Female	14	70.0%	TZJP98-CE000063
62	A.N.Gawande	Male	8	40.0%	TZJP98-CE000064
63	Janhavi dnyaneshwar kadu	Female	20	100.0%	TZJP98-CE000065
64	Nishant B Joshi	Male	10	50.0%	TZJP98-CE000066
65	Tanvi Ananda Parte	Female	16	80.0%	TZJP98-CE000067
66	Bhumika Ankush Raut	Female	16	80.0%	TZJP98-CE000068

(Mr Nikhil Chavan)
(RES Club Coordinator)

(A.P. Ansari Mohd Mubashshir)
(RES Club Incharge)

Renewable Energy Sources Club

SMT. INDIRA GANDHI COLLEGE OF ENGINEERING

Certificate Record of

Seminar on "FPGA IMPLEMENTATION OF RNN FOR SOLAR INVERTERS"

Date :- 10/07/2024 Time:- 3:00 P.M. to 5:00 P.M.

S.No	Name of Participant	Signature	Issued Certificate Number
1	Aayush Dwivedi	Aayush.D	TZJP98-CE0000.38
2	Kaushik P. Gawade	[illegible]	TZJP98-CE000032
3	Tushar. S. Shinde	[illegible]	TZJP98-CE000019
4	Vineet Bhadra	[illegible]	TZJP98-CE000031
5	Omkar Chavan	Omkar.PC	TZJP98-CE000012
6	Aniket. B. Bhandkoli	[illegible]	TZJP98-CE0000[illegible] 43
7	Atharva N. Khandirao	[illegible]	TZJP98-CE000006
8	Nikita Nitin Bhosale	NBhosale	TZJP98-CE000027
9	Yush N. Bagul	[illegible]	TZJP98-CE000034
10	Ritesh Jadhav	[illegible]	TZJP98-CE000040
11	Piyush Dinkar Bahate	[illegible]	TZJP98-CE000029
12	Kiran. Ramkishan Muknar	[illegible]	TZJP98-CE000037
13	Bhadane Heemanshi Sudhakar	[illegible]	TZJP98-CE000021
14	Janhavi Dnyaneshwar Kadu	[illegible]	TZJP98-CE000065
15	Sayli Anandrao Patil	[illegible]	TZJP98-CE000024
16	Sumit Kaushal	[illegible]	TZJP98-CE000033
17	Jay Patil	[illegible]	TZJP98-CE000045
18	Shravastee Thakur	[illegible]	TZJP98-CE000023
19	Srushti Patil	Patil	TZJP98-CE000022
20	Hrutuja. S. Gurav	Gurav	TZJP98-CE000020
21	Snigdha. Kadam	Snigdha.	TZJP98-CE000024
22	BHAVANA DHAMANKAR	Bhavana	TZJP98-CE000030
23	AMINISHA K NATEKAR	Aminisha	TZJP98-CE000035
24	DISHA P CHALKE	[illegible]	TZJP98-CE000025
25	ROHIT GAVIT	Gavit.	TZJP98-CE000014
26	NIKHIL CHAVAN	Nikhil.	TZJP98-CE000015
27	~~VAISHANVI~~ JADHAV VAISHNAVI	[illegible]	TZJP98-CE000026
28	OM Palata	omPalata	TZJP98-CE000007
29	Vinay. Kashti	Vinay	TZJP98-CE000010
30	Meet Bhatt	Meet	TZJP98-CE000009
31	Athrava Pol	Pol	TZJP98-CE000013
32	Ashish MORE	[illegible]	TZJP98-CE000004

(Mr Nikhil Chavan)

(RES Club Coordinator)

(A.P. Ansari Mohd Mubashshir)

(RES Club Incharge)

Renewable Energy Sources Club

SIGCE

SMT. INDIRA GANDHI COLLEGE OF ENGINEERING

Certificate Record of

Seminar on "FPGA IMPLEMENTATION OF RNN FOR SOLAR INVERTERS"

Date :- 10/07/2024 Time:- 3:00 P.M. to 5:00 P.M.

S.No	Name of Participant	Signature	Issued Certificate Number
33	Kunal Devendra Patil	7738820572	TZJP98-CE000011
34	Sangram Jadhav	[illegible]	TZJP98-CE000005
35	Nagraj B. Ambalgi	[illegible]	TZJP98-CE000016
36	Avantika Pol	Avantika	TZJP98-CE000017
37	B. Lipsa Reddy	Lipsa	TZJP98-CE000018
38	Vivek Dahigude	Vivek	TZJP98-CE000046
39	Manasvi More	[illegible]	TZJP98-CE000036
40	Anushree Thakur	[illegible]	TZJP98-CE000059
41	Shubham Sonawane	Sonawane	TZJP98-CE000044
42	Tanvi Paste	P.Paste	TZJP98-CE000067
43	Bhumika Raut	B.Raut	TZJP98-CE000068
44	Vishalakshi More	V.More	TZJP48-CE000001
45	N B Joshi	[illegible]	TZJP98-CE000066
46	Ansari Mohd	[illegible]	TZJP98-CE000053
47	Prof. M-U. Alam	[illegible]	TZJP98-CE000056
48	Prof. A N Gawande	[illegible]	TZJP98-CE000064
49	Prof. C.M.Chaudhari	[illegible]	TZJP98-CE000057
50	Mrs. Sangita Chaudhari	[illegible]	TZJP98-CE000061
51	prof. Utkarsha pawar	[illegible]	TZJP98-CE000063
52	Prof Pawar Udaysinh V	[illegible]	TZJP98-CE000016
53	Chandrakant Bane	[illegible]	TZJP98-CE000062
54	Sanjay Mahajan	[illegible]	TZJP98-CE000058
55	Akash Mane	Akash	TZJP98-CE000051
56	Shreyas Sawant	Sawant.	TZJP98-CE000050
57	Deep Satam	[illegible]	TZJP98-CE000055
58	Vaibhavi Taras	VTaras	TZJP98-CE000008
59	Shivam Rajendra Yadav	Shivamydv	TZJP98-CE000049
60	Shiana chavan	Shravan	TZJP98-CE000054
61	Rohit Gadhe	[illegible]	TZJP98-CE000042
62	Aniket Jadhav	Aniket	TZJP98-CE000047
63	Vinayak shinde	Vshinde	TZJP98-CE000041
64	Suyog Ghadi	SuyogG	TZJP98-CE000039
65	Satish Gupta	Satish	TZJP98-CE000048

(Mr Nikhil Chavan)
(RES Club Coordinator)

(A.P. Ansari Mohd Mubashshir)
(RES Club Incharge)

Renewable Energy Services Club
SIGCE

SMT. INDIRA GANDHI COLLEGE OF ENGINEERING

Certificate Record of

Seminar on "FPGA IMPLEMENTATION OF RNN FOR SOLAR INVERTERS"

Date :- 10/07/2024 Time:- 3:00 P.M. to 5:00 P.M.

S.No	Name of Participant	Signature	Issued Certificate Number
66	Samarth Rane	[signature]	TZJP98-CE000052
67			
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(Mr Nikhil Chavan)
(RES Club Coordinator)

(A.P. Ansari Mohd Mubashshir)
(RES Club Incharge)

"Renewable Energy Sources" Club
IGCE

Smt Indira Gandhi College Of Engineering

Certificate Of Participation

This is to certify that

Avantika Ganesh Pol

Has Attended Seminar on

"FPGA Implementation of RNN for Solar Inverters"

Organized by

"RENEWABLE ENERGY SOURCES" CLUB OF "ELECTRICAL ENGINEERING DEPARTMENT" on 10/07/2024 , from 3:00 pm to 5:00 pm of the Academic Year 2024-25.

Mr. Chanakya Hingu (Guest Speaker)	Asst.Prof Ansari Mohd (RES Club Incharge)	Prof N.B. Joshi (H.o.D Electrical)	Dr Sunil S Chavan (Principal)

Made for free with Certify'em

Certificate No :- TZJP98-CE000017

Smt Indira Gandhi College Of Engineering

Certificate Of Participation

This is to certify that

Aniket Bhandkoli

Has Attended Seminar on

"FPGA Implementation of RNN for Solar Inverters"

Organized by

"RENEWABLE ENERGY SOURCES" CLUB OF "ELECTRICAL ENGINEERING DEPARTMENT" on 10/07/2024 , from 3:00 pm to 5:00 pm of the Academic Year 2024-25.

Mr. Chanakya Hingu (Guest Speaker)	Asst.Prof Ansari Mohd (RES Club Incharge)	Prof N.B. Joshi (H.o.D Electrical)	Dr Sunil S Chavan (Principal)

Made for free with Certify'em

Certificate No :- TZJP98-CE000043

Smt Indira Gandhi College Of Engineering
Certificate Of Participation

This is to certify that

VINEET BHADRA

Has Attended Seminar on

"FPGA Implementation of RNN for Solar Inverters"

Organized by

"RENEWABLE ENERGY SOURCES" CLUB OF "ELECTRICAL ENGINEERING DEPARTMENT" on 10/07/2024 , from 3:00 pm to 5:00 pm of the Academic Year 2024-25.

Mr. Chanakya Hingu	Asst.Prof Ansari Mohd	Prof N.B. Joshi	Dr Sunil S Chavan
(Guest Speaker)	(RES Club Incharge)	(H.o.D Electrical)	(Principal)

Made for free with Certify'em

Certificate No :- TZJP98-CE000031

Smt Indira Gandhi College Of Engineering

Certificate Of Participation

This is to certify that

Rohit. K. Gavit

Has Attended Seminar on

"FPGA Implementation of RNN for Solar Inverters"

Organized by

"RENEWABLE ENERGY SOURCES" CLUB OF "ELECTRICAL ENGINEERING DEPARTMENT" on 10/07/2024 , from 3:00 pm to 5:00 pm of the Academic Year 2024-25.

Mr. Chanakya Hingu (Guest Speaker)	Asst.Prof Ansari Mohd (RES Club Incharge)	Prof N.B. Joshi (H.o.D Electrical)	Dr Sunil S Chavan (Principal)

Made for free with Certify'em

Certificate No :- TZJP98-CE000014

Smt Indira Gandhi College Of Engineering

Certificate Of Participation

This is to certify that

Vivek Vilas Dhaygude

Has Attended Seminar on

"FPGA Implementation of RNN for Solar Inverters"

Organized by

"RENEWABLE ENERGY SOURCES" CLUB OF "ELECTRICAL ENGINEERING DEPARTMENT" on 10/07/2024 , from 3:00 pm to 5:00 pm of the Academic Year 2024-25.

Mr. Chanakya Hingu (Guest Speaker)	Asst.Prof Ansari Mohd (RES Club Incharge)	Prof N.B. Joshi (H.o.D Electrical)	Dr Sunil S Chavan (Principal)

Made for free with Certify'em

Certificate No :- TZJP98-CE000046

31

JNIESTRT'S
SMT. INDIRA GANDHI COLLEGE OF ENGINEERING
GHANSOLI, NAVI MUMBAI – 400 701
(Approved by AICTE New Delhi & Govt. of Maharashtra, Affiliated to University of Mumbai)

Date :- 24/07/2024

Expenses Occurred for seminar

on "FPGA IMPLEMENTATION OF RNN FOR SOLAR INVERTERS"

Guest Speaker :- MR.CHANAKYA HINGU (Research Assistant –University of Nevada, Reno)
Event Date :- 10/07/2024.
Time :- 3:00 P.M. To 5:00 P.M.
Venue :- 3rd floor Seminar Room

Sr.No	Committee	Description	Expenses Occurred
1	Account & Finance	Guest Remuneration (Including TA)	2000/-
2	Media & photographic	Event Photos 10*15	150/-
3	Documentation	Report binding	50/-
4	Certificate Distribution	Certificate Distributed Online (Participant 66)	Nil /-
5	Reception	Gift (Pen), Marker Pen, Bouquet ,Cold Drink.	500/-
TOTAL			**2,700/-**

Advance Taken :- 3,750 /-
Expenses Occurred :- 2,700 /-
Amount To be returned :- 1,050 /-

ok 24/7/24

Forwarded to Principal for approval and advance settlement
24/07/24

24-07-24

(Renewable Energy Sources Club Incharge)
(A.P. Ansari Mohd Mubashshir)

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From: NIKHIL VILAS CHAVAN (State Bank of India)
chavannikhilvilas@oksbi

Google transaction ID
CICAgPCJjpHrVA

UPI

Pay

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₹120

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Completed

10 Jul 2024, 10:11 am

State Bank of India 5745

UPI transaction ID
455868429586

To: Mr Rajesh Yogendraprasad Gupta
paytmqr13mow1@paytm

From: NIKHIL VILAS CHAVAN (State Bank of India)
chavannikhilvilas@okaxis

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SMT. INDIRA GANDHI COLLEGE OF ENGINEERING
GHANSOLI, NAVI MUMBAI – 400 701
(Approved by AICTE New Delhi & Govt. of Maharashtra, Affiliated to University of Mumbai)

Remuneration Claim
Of
Expert Guest Lecturer / Industrial Expert Trainer

Name of Expert Guest lecturer / Trainer : - Chanakya Hingu

Name of Industry / Organization :- Research Assistant: University of Nevada, Reno

Address for Communication :- 1551 N Virginia St, Reno, NV, USA
Pin: 89503.

Mobile Number :- 861-488-8191 Email ID:- chingu@unr.edu

Seminar Topic / STTP :- " **FPGA IMPLEMENTATION OF RNN FOR SOLAR INVERTERS** ".

Seminar Date :- 10/7/24 Duration :- 3:00 - 5:00 pm

Number of Students Present :- ______ Number of Faculty Present :- ______

Detail of Claim :-

1) For Conducting Seminar. : 1500 /-Rs
2) For Conducting STTP. : ______ /-Rs
3) For Conducting Workshop. : ______ /-Rs
4) Travelling Allowance. : 500/- /-Rs

Total : 2000/- /-Rs

I hereby acknowledge the receipt of above amount.

Hingu
Signature 10/7/24.
(Expert Guest Lecturer / Industrial Expert Trainer)

Curricular Gap

Class :- TE Electrical   Sem:- V   Subject :- RES   Academic Year :2024-25

1) Per Unit Production cost of Conventional & Non-Conventional energy Sources.
2) Performance Analysis of collector.
3) Measurement of solar radiation.
4) Economic analysis of renewable energy system.
5) Recent trends in solar PV manufacturing.
6) Design of Inverter for renewable energy sources.

Proposed Action :- Guest Lecture / Seminar / Industrial Visit / Presentation / Group Assignment / Mini Project.

PO Covered :- PO1, PO2, PO3, PO4,PO5,PO6,PO7, PSO1 & PSO2

PAQIC coordinator.

10-07-24.
(Asst.Prof. Ansari Mohd M.M.Y)
(Subject Incharge)

JNIESTRT

Smt. Indira Gandhi College of Engineering

Department of Electrical Engineering

CEOs & COs

Renewable Energy Sources Club

Course Educational Objectives (CEOs) :-

1. To review of conventional and non-conventional energy sources.
2. To give the students basic knowledge of solar thermal energy applications
3. To give the students basic knowledge solar photovoltaic system.
4. To give the students basic knowledge of wind energy system
5. To give the students basic knowledge of fuel cell system operation
6. To give the students basic knowledge about other renewable energy sources.
7. To give the students basic knowledge of recent trends in renewable energy sources.

Course Outcomes (COs) :-

At the end of the course student will be able to ;		POs	PSOs	Bloom Level
RES CLUB.1	1) Understand the PWM technique in solar inverter.	PO1,PO6,PO7	PSO1	Understand
RES CLUB.2	2) Generate PWM signal for solar inverter.	PO1, PO2	PSO1	Apply
RES CLUB.3	3) Understand the basic concept of FPGA & RNN for solar inverter.	PO1, PO5	PSO1	Apply
RES CLUB.4	4) Analyze the Implementation of RNN on Intel FPGA TR4 board.	PO1, PO4	PSO2	Analyze
RES CLUB.5	5) Develop the hardware of solar inverter.	PO1, PO3	PSO2	Develop
RES CLUB.6	6) Testing & result validation of Solar inverter.	PO4, PO5	PSO2	Analyze

FPGA IMPLEMENTATION OF RNN FOR SOLAR INVERTERS	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PSO1,PSO2

(RES Club Incharge)
(Asst.Prof Ansari Mohd Mubashshir)

JNIESTRT

Smt. Indira Gandhi College of Engineering

Department of Electrical Engineering

Renewable Energy Sources Club

Modes of Content Delivery:-

i	Class room teaching	v	Self-Learning online resources	ix	Industrial visit
ii	Tutorial/Assignment	vi	Slides	x	Group discussion
iii	Remedial coaching	vii	Simulations/Demonstration	xi	Seminar/Mock Oral
iv	Lab experiment	viii	Expert lecture	xii	Case study

COs Mapping with content Delivery :-

COs Mapping with content Delivery													
Sr No	Course Outcome	Mode of Content Delivery											
		i	ii	iii	iv	v	vi	vii	viii	ix	x	xi	xii
1	RES CLUB.1								√				
2	RES CLUB.2								√				
3	RES CLUB.3								√				
4	RES CLUB.4								√				
5	RES CLUB.5								√				
6	RES CLUB.6								√				

PO/ PSO: Learning Hours & Course Mapping

Code	Programe Outcome / Program Specific Outcome	No. Of Hours	Mapping Strength
PO1	**Engineering Knowledge:-** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.	2	3
PO2	**Problem Analysis:-** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusion using first principles of mathematics, sciences, and engineering sciences.	2	2
PO3	**Design/development of solutions:-** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations	2	2
PO4	**Conduct investigations of complex problems:-** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.	2	2
PO5	**Modern tool usage:-** Create, select, and apply appropriate techniques , resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.	2	1
PO6	**The engineer and society:-** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.	2	2
PO7	**Environment and sustainability:-** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need of sustainable development.	2	2
PO8	**Ethics:-** Apply ethical principles and commit to professional ethics and responsibilities and norms of engineering practice.	0	0
PO9	**Individual and team work:-** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.	0	0
PO10	**Communication:-** Communicate effectively in complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.	0	0
PO11	**Project management and finance:-** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments	0	0
PO12	**Life-long learning:-** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.	0	0
PSO1	Understand the concept and application of Electrical machines, power systems and control system.	2	2
PSO2	Assess the performance of Electrical system to maintain its functioning.	2	3
PSO3	Aspire to work in team to executeengineering activities in society.	0	0

Course Outcome Attainment

A. Level of Attainments

Level	Average of Course Outcome					
	Guest Feedback (%)		Quiz (%)		CES (%)	
	>	<=	>	<=	>	<=
1	40	60	70	80	75	80
2	60	80	80	90	80	85
3	80	100	90	100	85	100

B. Indirect Attainment Calculation by Guest Feedback

Guest Feedback (Indirect Attainment)		
COs	Avg	Attn (X)
RES CLUB.1	90.00	3.00
RES CLUB.2	90.00	3.00
RES CLUB.3	90.00	3.00
RES CLUB.4	90.00	3.00
RES CLUB.5	90.00	3.00
RES CLUB.6	90.00	3.00

C. Direct Attainment Calculation by Quiz

Quiz (Direct Attainement)		
COs	Avg	Attn (Y)
RES CLUB.1	98.48	3.00
RES CLUB.2	93.94	3.00
RES CLUB.3	78.03	1.00
RES CLUB.4	90.15	3.00
RES CLUB.5	71.97	1.00
RES CLUB.6	80.30	2.00

D. Indirect Attainment Calculation by CES

CES (Indirect Attainment)		
COs	Avg	Attn (Z)
RES CLUB.1	88.38	3.00
RES CLUB.2	89.39	3.00
RES CLUB.3	87.88	3.00
RES CLUB.4	88.38	3.00
RES CLUB.5	86.36	3.00
RES CLUB.6	88.89	3.00

D. Final Course Outcome Attainment Calculation: 0.9(0.5X+0.5Y)+0.1(Z)

COs	Indirect Guest feedback (X)	Direct Quiz (Y)	Indirect CES (Z)	Final Attn
RES CLUB.1	3.00	3.00	3.00	3.00
RES CLUB.2	3.00	3.00	3.00	3.00
RES CLUB.3	3.00	1.00	3.00	2.10
RES CLUB.4	3.00	3.00	3.00	3.00
RES CLUB.5	3.00	1.00	3.00	2.10
RES CLUB.6	3.00	2.00	3.00	2.55

E. Legands

Attn: -> Attainment Level
CES -> Course Exit Survey

(Ansari Mohd).

Course Outcome to Program Outcome Mapping

A. CO-PO & CO-PSO Mapping :-

Cos	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
RES CLUB.1	Y	N	N	N	N	Y	Y	N	N	N	N	N	Y	N	N
RES CLUB.2	Y	Y	N	N	N	N	N	N	N	N	N	N	Y	N	N
RES CLUB.3	Y	N	N	N	Y	N	N	N	N	N	N	N	Y	N	N
RES CLUB.4	Y	N	N	Y	N	N	N	N	N	N	N	N	N	Y	N
RES CLUB.5	Y	N	Y	N	N	N	N	N	N	N	N	N	N	Y	N
RES CLUB.6	N	N	N	Y	Y	N	N	N	N	N	N	N	N	Y	N

C. Mapping of COs with POs & PSOs

COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
RES CLUB.1	3												2		
RES CLUB.2	3	2											2		
RES CLUB.3	3												2		
RES CLUB.4	3			2	1									3	
RES CLUB.5	3		2			2								3	
RES CLUB.6				2	1		2							3	
RES CLUB	**3.0**	**2.0**	**2.0**	**2.0**	**1.0**	**2.0**	**2.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**2.0**	**3.0**	**0.0**

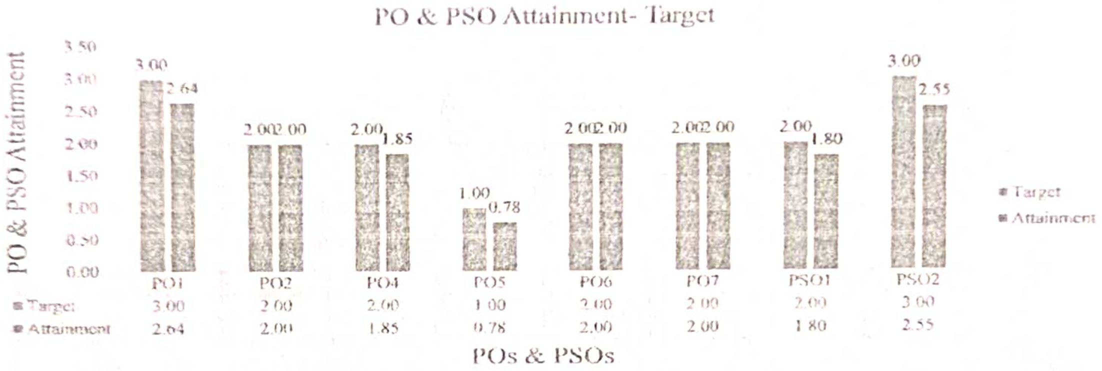
Program Outcome Attainment

COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
RES CLUB.1	3.00	NA	NA	NA	NA	3.00	3.00	NA	NA	NA	NA	NA	3.00	NA	NA
RES CLUB.2	3.00	3.00	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.00	NA	NA
RES CLUB.3	2.10	NA	NA	NA	2.10	NA	NA	NA	NA	NA	NA	NA	2.10	NA	NA
RES CLUB.4	3.00	NA	NA	3.00	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.00	NA
RES CLUB.5	2.10	NA	2.10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.10	NA
RES CLUB.6	NA	NA	NA	2.55	2.55	NA	NA	NA	NA	NA	NA	NA	NA	2.55	NA
Avg Attainment	**2.64**	**3.00**	**2.10**	**2.78**	**2.33**	**3.00**	**3.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**2.70**	**2.55**	**0.00**
Mapping Strength	**3.0**	**2.0**	**2.0**	**2.0**	**1.0**	**2.0**	**2.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**2.0**	**3.0**	**0.0**
PO Attainment	**2.64**	**2.00**	**1.40**	**1.85**	**0.78**	**2.00**	**2.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.80**	**2.55**	**0.00**

Attainment of PO / PSO = (Average Attainment of Relevant CO) X Scale Factor
Scale Factor = (Actual Mapping Strength / Maximum Possible Mapping Strength

PO & PSO Attainment of Seminar

Program Outcome	Target	Attainment
PO1	3.00	2.64
PO2	2.00	2.00
PO3	2.00	1.40
PO4	2.00	1.85
PO5	1.00	0.78
PO6	2.00	2.00
PO7	2.00	2.00
PO8	0.00	0.00
PO9	0.00	0.00
PO10	0.00	0.00
PO11	0.00	0.00
PO12	0.00	0.00
PSO1	2.00	1.80
PSO2	3.00	2.55
PSO3	0.00	0.00



"Renewable Energy Sources" Club

(Ansari Mohd).

" FPGA IMPLEMENTATION OF RNN FOR SOLAR INVERTERS " Seminar feedback form 2024-25.

Seminar Arranged by "Renewable Energy Sources Club" of Electrical Engineering Department.

* Indicates required question

1. Email *

2. Name of Participant *

3. Name of College *

4. Mobile Number *

5. Email ID *

6. Gender *

   Mark only one oval.

   - Male
   - Female

7. Select Profession *

   Mark only one oval.

   - Student
   - Faculty

Course Exit Form

RES Club seminar on "

FPGA IMPLEMENTATION OF RNN FOR SOLAR INVERTERS ".

8. Course Exit Form *

Mark only one oval per row.

	3	2	1
Q1) Are you able to describe PWM technique in solar inverter?			
2) Are you able to generate PWM signal for solar inverter?			
3) Are you able to apply basic concept of FPGA & RNN for solar inverter?			
4) Are you able to analyze the Implementation of RNN on Intel FPGA TR4 board?			
5) Are you able to develop the hardware of solar inverter?			
6) Are you able to do testing & result validation of Solar inverter?			

Feedback Form (To identify Quality of Guest Speaker)

RES Club seminar on " FPGA IMPLEMENTATION OF RNN FOR SOLAR INVERTERS ".

9. Feedback Form *

Mark only one oval per row.

	3	2	1
Q1) Is the Seminar useful from academic point of view?			
Q2) Did you receive all the information's you are expecting from this Seminar?			
Q3) The content was meaningful and relevant to the Seminar topic.			
Q4) The speaker was knowledgeable, effective and stimulating.			
Q5) The material was presented in an organized manner.			
Q6) Will your professional attributes increase from this Semiinar?			
Q7) The duration of Seminar was satisfactory			
Q8) Are you satisfied by the answer given by the speaker for the asked question?			
Q9) Would you recommend this workshop / Seminar to other members?			

Q10) Would you like to attend any further Conference / Training /Workshop/Webinar?			

10. Is any Curricular gaps filled through this activity? *

Mark only one oval.

- [ ] Yes , Renewable Energy Sources Curricular gaps filled.
- [ ] No.

11. Feedback Form (As per POs) *

Mark only one oval per row.

	3	2	1
Gain Engineering knowledge (PO 1)			
Gain knowledge about problem analysis (PO 2)			
Gain knowledge about design/development of solutions (PO 3)			
Gain knowledge about investigations of complex problems (PO 4)			
Gain knowledge about Modern tool usage (PO 5)			
Learn to apply reasoning to engineering and societal, health, safety, legal and cultural issues (PO 6)			
Understand the impact of the professional engineering solutions to environment and sustainability (PO 7)			
Learn professional ethics and responsibilities (PO 8)			
Learn about			

Learn about individual and team work (PO 9)			
Learn effective communication (PO 10)			
Learn engineering and management principles (PO 11)			
Ability to engage in independent and life long learning (PO 12)			
Ability to understand the concept and application of Electrical machines, power systems and control system. (PSO 1)			
Ability to assess the performance of Electrical system to maintain it's functioning. (PSO 2)			
Aspire to work in team to execute engineering activities in society. (PSO 3)			

12. Any suggestions for improvement? *

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Google Forms

Smt Indira Gandhi College of Engineering

RES Club Seminar on "FPGA IMPLEMENTATION OF RNN FOR SOLAR INVERTERS"

Course Exit Form Analysis

Sr.No.	Name of Participant	Course Exit Form [Q1) Are you able to describe PWM technique in solar inverter?]	Course Exit Form [2) Are you able to generate PWM signal for solar inverter?]	Course Exit Form [3) Are you able to apply basic concept of FPGA & RNN for solar inverter?]	Course Exit Form [4) Are you able to analyze the Implementation of RNN on Intel FPGA TR4 board?]	Course Exit Form [5) Are you able to develop the hardware of solar inverter?]	Course Exit Form [6) Are you able to do testing & result validation of Solar inverter?]
1	Aminisha Kamalakar Natekar	3	3	3	3	3	3
2	Sumit Kaushal	3	3	3	3	3	3
3	Ashish More	3	3	3	3	3	3
4	Shravastee Thakur	2	2	2	2	2	2
5	Barhate Piyush Dinkar	3	3	3	3	3	3
6	Chalke Disha Pandurang	3	3	3	3	3	3
7	Nikita Nitin Bhosale	2	2	2	2	2	2
8	Tanvi ananda parte	2	2	3	2	2	3
9	Srushti Patil	3	3	3	3	3	3
10	ATHARVA NARENDRA KHANDE	3	3	3	3	3	3
11	Yash Nitin Bagul	3	3	3	3	3	3
12	Kiran ramkishan muknar	3	3	3	3	3	3
13	Vaishnavi Navnath Jadhav	3	3	3	3	3	3
14	Meet Bhatt	3	3	3	3	2	3
15	VINAY JAGDISH KOSHTI	3	3	3	3	3	3
16	Hrutuja Shriram Gurav	3	3	3	3	3	3
17	ATHARV RAJESH POI	3	3	3	3	3	3
18	Bhumika Ankush Raut	3	3	3	3	3	3
19	Savli Anandrao Patil	1	1	1	1	1	1
20	Avantika Pol	2	3	2	2	2	2
21	More Vishalakshi Baburao	3	3	3	3	3	3
22	Ritesh Rajendra jadhav	1	1	2	1	2	1
23	Bhavana Sandeep Dhamankar	3	3	3	3	3	3
24	S LIPSA REDDY	2	3	1	2	3	2
25	VINEET BHADRA	3	3	3	3	3	3
26	Shreyas Dayanand Sawant	2	2	2	2	2	2
27	Vaibhavi Ajay Taras	3	3	3	3	3.	3
28	Sangram jadhav	1	1	1	1	1	1
29	Manasvi More	2	2	3	2	3	3
30	Jay Nandkumar Patil	2	2	2	2	2	2
31	Onkar Rajendra Chavan	3	3	3	3	3	3
32	Aniket Bhandkoli	3	3	3	3	3	3
33	Bhadane Heemanshi Sudhakar	3	3	3	3	3	3
34	Nagaraj Bhimashankar Ambalgi	1	2	1	2	1	2
35	Kunal Devendra Patil	2	2	1	2	1	2
36	Om Palata	3	3	3	3	3	3
37	Aayush Dwivedi	3	3	3	3	3	3

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Smt Indira Gandhi College of Engineering

RES Club Seminar on "FPGA IMPLEMENTATION OF RNN FOR SOLAR INVERTERS"

Course Exit Form Analysis

Sr No.	Name of Participant	Course Exit Form [Q1) Are you able to describe PWM technique in solar inverter?]	Course Exit Form [2) Are you able to generate PWM signal for solar inverter?]	Course Exit Form [3) Are you able to apply basic concept of FPGA & RNN for solar inverter?]	Course Exit Form [4) Are you able to analyze the Implementation of RNN on Intel FPGA TR4 board?]	Course Exit Form [5) Are you able to develop the hardware of solar inverter?]	Course Exit Form [6) Are you able to do testing & result validation of Solar inverter?]
38	Nikhil Vilas Chavan	3	3	3	3	3	3
39	Tushar shinde	2	2	2	2	2	2
40	Kaushik parshuram gawade	3	3	3	3	3	3
41	Rohit. K. Gavit	3	3	3	3	3	3
42	Mohd Khursheed Alam	3	3	3	2	2	2
43	Nishant B Joshi	3	3	3	3	3	3
44	Shivam Rajendra Yadav	2	3	2	3	2	2
45	Ansari Mohd Mubashshir Mohd Yun	3	2	3	3	2	3
46	Samarth Rane	3	3	3	3	3	3
47	janhavi dyaneshwar kadu	3	3	3	3	3	3
48	Chandrashekhar Chaudhari	3	3	2	2	3	3
49	Sarika Matey	3	3	3	3	3	3
50	Utkarsha pawar	3	3	3	3	3	2
51	Vinayak Naresh Shinde	3	3	3	3	3	3
52	Vivek Vilas Dhaygude	2	3	2	3	2	3
53	Suyog Sudhakar Ghadi	3	3	2	3	3	2
54	Satishkumar gupta	3	2	3	3	2	3
55	Aniket jadhav	3	3	2	2	3	2
56	Rohit Gadhe	3	3	3	3	3	3
57	Deep Laxman Satam	3	3	3	3	3	3
58	Akash Vishwas Mane	3	3	3	3	3	2
59	Shubham sonawane	3	3	2	3	2	3
60	Snigdha Sanjay Kadam	3	3	3	3	3	3
61	Anushree Deepak Thakur	3	3	3	3	3	3
62	Pawar Udaysinh V.	2	3	3	3	2	3
63	Sangita Nitin Chaudhari	2	1	3	3	1	3
64	chandrakant bamane	3	2	3	2	3	3
65	A.N.Gawande	3	3	3	2	3	3
66	Shaina durgappa chavan	2	2	2	2	2	2

Average of Marks	2.65	2.68	2.64	2.65	2.59	2.67
Maximum Marks	3.00	3.00	3.00	3.00	3.00	3.00
Percentage of Average Marks	88.38	89.39	87.88	88.38	86.36	88.89

COs	Q1 (CO1)	Q2 (CO2)	Q3 (CO3)	Q4 (CO4)	Q5 (CO5)	Q6 (CO6)	CO Average
CO1	88.38						88.38
CO2		89.39					89.39
CO3			87.88				87.88
CO4				88.38			88.38
CO5					86.36		86.36
CO6						88.89	88.89

"Renewable Energy Sources" Club

(Ansari Mohd)

Smt Indira Gandhi College of Engineering

RLS Club Seminar on "FPGA IMPLEMENTATION OF RNN FOR SOLAR INVERTERS"

General Feedback Analysis

Sr No	Name of Participant	Feedback Form (Q1) Is the Seminar useful from academic point of view?]	Feedback Form (Q2) Did you receive all the information's you are expecting from this Seminar?]	Feedback Form (Q3) The content was meaningful and relevant to the Seminar topic]	Feedback Form (Q4) The speaker was knowledgeable, effective and stimulating]	Feedback Form (Q5) The material was presented in an organized manner	Feedback Form (Q6) Will your professional attributes increase from this Seminar?]	Feedback Form (Q7) The duration of Seminar was satisfactory]	Feedback Form (Q8) Are you satisfied by the answer given by the speaker for the asked question?]	Feedback Form (Q9) Would you recommend the workshop / Seminar to other members?]	Feedback Form (Q10) Would you like to attend any further Conference / Training workshop/Webinar?]
1	Aminisha Kamalekar Natekar	3	3	3	3	3	3	3	3	3	3
2	Sumit Kaushal	3	3	3	3	3	3	3	3	3	3
3	Ashish More	3	3	3	3	3	3	3	3	3	3
4	Shravastee Thakur	2	2	2	2	2	2	2	2	2	2
5	Barhate Piyush Dinkar	3	3	3	3	3	3	3	3	3	3
6	Chalke Disha Pandurang	3	3	3	3	3	3	3	3	3	3
7	Nikita Nitin Bhosale	2	2	2	2	2	2	2	2	2	2
8	Tanvi ananda parte	2	2	2	2	2	2	2	2	2	2
9	Srushti Patil	3	3	3	2	2	2	2	2	3	3
10	ATHARVA NARENDRA KHANDERA(	2	2	2	2	2	[illegible]	2	3	2	3
11	Yash Nitin Bagul	3	3	3	3	3	3	3	3	3	3
12	Kiran ramkishan muknar	3	3	3	3	3	3	3	3	3	3
13	Vaishnavi Navnath Jadhav	3	3	3	3	3	3	3	3	3	3
14	Meet Bhatt	3	3	3	3	2	3	3	3	3	2
15	VINAY JAGDISH KOSHTI	3	3	3	3	3	3	3	3	3	3
16	Hrutuja Shriram Gurav	3	3	3	3	3	3	3	3	3	3
17	ATHARV RAJESH POL	3	3	3	3	3	3	3	3	3	2
18	Bhumika Ankush Raut	3	3	3	3	3	3	3	3	3	3
19	Sayli Anandrao Patil	3	3	3	3	3	3	3	3	3	3
20	Avantika Pol	3	3	3	3	3	3	3	3	3	3
21	More Vishalakshi Baburao	3	3	3	3	3	3	3	3	3	3
22	Ritesh Rajendra jadhav	1	2	2	1	1	1	2	1	1	2
23	Bhavana Sandeep Dhamankar	3	3	3	3	3	3	3	3	3	3
24	SURSA REDDY	3	2	1	2	3	2	2	3	3	3
25	VINEET BHADRA	3	3	3	3	3	3	3	3	3	3
26	Shreyas Dayanand Sawant	3	3	3	3	3	3	3	3	3	3
27	Vaibhav Ajay Taras	2	2	2	2	2	2	2	2	2	3
28	Sangram jadhav	1	1	1	1	1	1	1	1	1	1
29	Manasv More	3	3	3	3	3	3	3	3	3	3

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Smt Indira Gandhi College of Engineering

RES Club Seminar on "FPGA IMPLEMENTATION OF RNN FOR SOLAR INVERTERS"

General Feedback Analysis

Sr No	Name of Participant	Feedback Form [Q1) Is the Seminar useful from academic point of view?]	Feedback Form [Q2) Did you receive all the information's you are expecting from this Seminar?]	Feedback Form [Q3) The content was meaningful and relevant to the Seminar topic]	Feedback Form [Q4) The speaker was knowledgeable, effective and stimulating]	Feedback Form [Q5) The material was presented in an organized manner]	Feedback Form [Q6) Will your professional attributes increase from this Seminar?]	Feedback Form [Q7) The duration of Seminar was satisfactory]	Feedback Form [Q8) Are you satisfied by the answer given by the speaker for the asked question?]	Feedback Form [Q9) Would you recommend this workshop / Seminar to other members?]	Feedback Form [Q10) Would you like to attend any further Conference / Training workshop/Webinar?]
30	Jay Nandkumar Patil	2	2	2	2	2	2	2	2	2	2
31	Onkar Rajendra Chavan	3	3	3	3	3	3	3	3	3	3
32	Aniket Bhandkoli	3	2	2	2	2	2	2	2	2	2
33	Bhadane Heemanshi Sudhakar	3	3	3	3	3	3	3	3	3	3
34	Nagara, Bhimashankar Ambaig	2	1	2	1	2	1	2	1	2	1
35	Kunal Devendra Patil	2	1	2	2	1	2	1	1	2	1
36	Om Palata	3	3	3	3	3	3	3	3	3	3
37	Aayush Dwivedi	3	3	3	3	3	3	3	3	3	3
38	Nikhil Vilas Chavan	3	3	3	3	3	3	3	3	3	3
39	Tushar shinde	2	2	2	2	2	2	2	2	2	2
40	Kaushik parshuram gawade	3	3	3	3	3	3	3	3	3	3
41	Rohit K Gavit	3	3	3	3	3	3	3	3	3	3
42	Mohd Khursheed Alam	3	3	3	3	2	2	2	3	3	3
43	Nishant B Joshi	3	3	3	3	3	3	3	3	3	3
44	Shivam Rajendra Yadav	2	3	2	3	2	2	2	2	3	2
45	Ansan Mohd Mubashshir Mohd Yunus	3	3	2	3	3	3	3	2	3	3
46	Samarth Rane	3	2	3	2	3	2	3	2	3	3
47	janhavi dyaneshwar kadu	3	3	3	3	3	3	3	3	3	3
48	Chandrashekhar Chaudhari	3	3	3	3	3	2	2	2	3	3
49	Sanika Matey	3	3	3	3	3	3	3	3	3	3
50	Utkarsha pawar	2	2	3	2	3	2	3	2	2	2
51	Vinayak Naresh Shinde	3	3	3	3	3	3	3	3	3	3
52	Vivek Vilas Dhaygude	2	3	2	3	2	3	2	3	2	3
53	Suyog Sudhakar Ghadi	3	2	3	3	3	3	2	3	3	3
54	Satishkumar gupta	3	3	3	3	3	2	2	2	2	3
55	Aniket jadhav	3	3	3	3	3	3	3	3	3	3
56	Rohit Gadhe	3	3	3	3	2	3	3	3	3	3
57	Deep Laxman Satam	3	3	3	3	3	3	3	3	3	3
58	Akash Vishwas Mane	3	3	3	3	3	2	3	2	3	3
59	Shubham sonawane	3	2	3	3	3	2	3	3	3	3
60	Snigdha Sanjay Kadam	3	3	3	3	3	3	3	3	3	3
61	Anushree Deepak Thakur	3	3	3	3	3	3	3	3	3	3
62	Pawar Udaysinh V	3	3	2	3	3	2	3	3	3	3
63	Sangita Nitin Chaudhari	2	2	3	2	2	2	3	3	2	3
64	chandrakant bamane	3	3	2	2	3	3	3	3	2	3
65	A.N.Gawande	3	3	3	3	3	2	3	2	3	3
66	Shaina durgappa chavan	2	2	2	2	2	2	2	2	2	2

	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
Average of Marks	2.73	2.67	2.68	2.67	2.65	2.58	2.65	2.62	2.70	2.73
Maximum Marks	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
Percentage of Average Marks	90.91	88.89	89.39	88.89	88.38	85.86	88.38	87.37	89.90	90.91
Overall Feedback	88.89 %									

"Renewable Energy Sources" Club SIGCE

(Ansari Mohd).

Smt Indira Gandhi College of Engineering

RES Club Seminar on "FPGA IMPLEMENTATION OF RNN FOR SOLAR INVERTERS"

PO Based Feedback Analysis

Sr.No.	Name of Participant	Feedback Form (As per POs) [Gain Engineering knowledge (PO 1)]	Feedback Form (As per POs) [Gain knowledge about problem analysis (PO 2)]	Feedback Form (As per POs) [Gain knowledge about design/development of solutions (PO 3)]	Feedback Form (As per POs) [Gain knowledge about investigations of complex problems (PO 4)]	Feedback Form (As per POs) [Gain knowledge about Modern tool usage (PO 5)]	Feedback Form (As per POs) [Learn to apply reasoning to engineering and societal health, safety, legal and cultural issues (PO 6)]	Feedback Form (As per POs) [Understand the impact of the professional engineering solutions to environment and sustainability (PO 7)]
1	Aminisha Kamalakar Natekar	3	3	3	3	3	3	2
2	Sumit Kaushal	3	3	3	3	3	3	3
3	Ashish More	3	3	3	3	3	3	3
4	Shravastee Thakur	2	2	2	2	2	2	2
5	Barhate Piyush Dinkar	3	3	2	3	3	3	2
6	Chalke Disha Pandurang	3	3	3	3	3	3	3
7	Nikita Nitin Bhosale	2	2	2	2	2	2	2
8	Tanvi ananda parte	2	2	3	2	2	3	3
9	Srushti Patil	2	2	2	2	2	2	2
10	ATHARVA NARENDRA KHANDERAO	2	3	3	2	3	2	3
11	Yash Nitin Bagul	3	3	3	3	3	3	3
12	Kiran ramkishan muknar	3	3	3	3	3	3	3
13	Vaishnav Navnath Jadhav	3	3	3	3	3	3	3
14	Meet Bhatt	3	3	3	3	3	3	3
15	VINAY JAGDISH KOSHTI	3	3	3	3	3	3	3
16	Hrutuja Shriram Gurav	3	3	3	3	3	3	3
17	ATHARV RAJESH POL	3	3	3	3	3	3	3
18	Bhumika Ankush Raut	3	3	3	3	3	3	3
19	Sayli Anandrao Patil	3	3	3	3	3	3	3
20	Avantika Pol	2	2	2	2	2	2	2
21	More Vishalakshi Baburao	3	3	3	3	3	3	3
22	Ritesh Rajendra jadhav	1	2	1	1	1	1	2
23	Bhavana Sandeep Dhamankar	3	3	3	3	3	3	3
24	S LIPSA REDDY	3	1	2	2	3	2	2
25	VINEET BHADRA	3	3	3	3	3	3	3
26	Shreyas Dayanand Sawant	3	3	3	3	3	3	3
27	Vaibhavi Ajay Taras	2	2	2	2	2	2	2
28	Sangram jadhav	1	1	1	1	1	1	1
29	Manasvi More	3	3	3	3	3	3	3
30	Jay Nandkumar Patil	2	2	2	2	2	2	2
31	Onkar Rajendra Chavan	3	3	3	3	3	3	3
32	Aniket Bhandkoli	2	2	3	2	2	2	2
33	Bhadane Heemanshi Sudhakar	3	3	3	3	3	3	3
34	Nagaraj Bhimashankar Ambalgi	2	1	2	1	1	2	1
35	Kunal Devendra Patil	1	2	1	2	2	1	1
36	Om Palata	3	3	3	3	3	3	3
37	Aayush Dwivedi	3	3	3	3	3	3	3
38	Nikhil Vilas Chavan	3	3	3	3	3	3	3
39	Tushar shinde	2	2	2	2	2	2	2
40	Kaushik parshuram gawade	3	3	3	3	3	3	3
41	Rohit K Gavit	3	3	3	3	3	3	3
42	Mohd Khursheed Alam	3	3	3	2	2	1	2
43	Nishant B Joshi	3	3	2	1	2	2	2

Smt Indira Gandhi College of Engineering

RES Club Seminar on "FPGA IMPLEMENTATION OF RNN FOR SOLAR INVERTERS"

PO Based Feedback Analysis

Feedback Form (As per POs) [Learn professional ethics and responsibilities (PO 8)]	Feedback Form (As per POs) [Learn about Individual and team work (PO 9)]	Feedback Form (As per POs) [Learn effective communication (PO 10)]	Feedback Form (As per POs) [Learn engineering and management principles (PO 11)]	Feedback Form (As per POs) [Ability to engage in independent and life-long learning (PO 12)]	Feedback Form (As per POs) [Ability to understand the concept and application of Electrical machines, power systems and control system (PSO 1)]	Feedback Form (As per POs) [Ability to assess the performance of Electrical system to maintain it's functioning (PSO 2)]	Feedback Form (As per POs) [Aspire to work in team to execute engineering activities in society (PSO 3)]
3	3	3	3	3	3	3	3
3	3	3	3	3	3	3	3
3	3	3	3	3	3	3	3
2	2	2	2	2	2	2	2
3	3	2	3	3	3	3	3
3	3	3	3	3	3	3	3
2	2	2	2	2	2	2	2
2	2	2	2	2	2	2	2
2	3	3	3	3	3	3	3
3	3	2	3	2	2	2	3
3	3	3	3	3	3	3	3
3	3	3	3	3	3	3	3
3	3	3	3	3	3	3	3
3	3	3	3	3	3	3	3
3	3	3	3	3	3	3	3
3	3	3	3	3	3	3	3
3	3	3	3	3	3	3	3
3	3	3	3	3	3	3	3
3	3	3	3	3	3	3	3
2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3
1	1	1	1	2	1	2	1
3	3	3	3	3	3	3	3
1	1	2	2	2	3	2	2
3	3	3	3	3	3	3	3
3	3	3	3	3	3	3	3
2	2	2	2	2	2	2	2
1	1	1	1	1	1	1	1
3	3	3	3	3	3	3	3
2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3
3	2	2	2	2	2	3	3
3	3	3	3	3	3	3	3
2	1	2	1	2	1	2	1
2	2	1	1	2	2	2	1
3	3	3	3	3	3	3	3
3	3	3	3	3	3	3	3
3	3	3	3	3	3	3	3
2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3
3	3	3	3	3	3	3	3
1	1	2	2	3	3	3	1
1	1	2	2	1	2	2	1

Smt Indira Gandhi College of Engineering

RES Club Seminar on "FPGA IMPLEMENTATION OF RNN FOR SOLAR INVERTERS"

PO Based Feedback Analysis

Sr.No.	Name of Participant	Feedback Form (As per POs) [Gain Engineering knowledge (PO 1)]	Feedback Form (As per POs) [Gain knowledge about problem analysis (PO 2)]	Feedback Form (As per POs) [Gain knowledge about design/development of solutions (PO 3)]	Feedback Form (As per POs) [Gain knowledge about investigations of complex problems (PO 4)]	Feedback Form (As per POs) [Gain knowledge about Modern tool usage (PO 5)]	Feedback Form (As per POs) [Learn to apply reasoning to engineering and societal, health, safety, legal and cultural issues (PO 6)]	Feedback Form (As per POs) [Understand the impact of the professional engineering solutions to environment and sustainability (PO 7)]
44	Shivam Rajendra Yadav	2	3	2	2	3	2	3
45	Ansari Mohd Mubashshir Mohd Yunus	2	3	3	2	3	3	3
46	Samarth Rane	3	2	3	2	1	3	2
47	janhavi dyaneshwar kadu	3	3	3	3	3	3	3
48	Chandrashekhar Chaudhari	3	3	3	2	3	1	2
49	Sanika Matey	3	2	2	3	3	3	3
50	Utkarsha pawar	3	2	3	2	3	3	2
51	Vinayak Naresh Shinde	3	3	3	3	3	3	3
52	Vivek Vilas Dhaygude	2	3	2	3	2	3	2
53	Suyog Sudhakar Ghadi	3	3	3	3	3	3	3
54	Satishkumar gupta	2	3	2	2	3	2	2
55	Aniket jadhav	3	3	3	3	3	3	3
56	Rohit Gadhe	3	2	3	3	3	3	3
57	Deep Laxman Satam	3	3	3	2	3	3	3
58	Akash Vishwas Mane	3	2	3	2	3	2	3
59	Shubham sonawane	3	3	2	2	3	3	3
60	Snigdha Sanjay Kadam	3	3	3	3	3	3	3
61	Anushree Deepak Thakur	3	3	3	3	3	3	3
62	Pawar Udaysinh V.	3	2	3	3	3	3	3
63	Sangita Nitin Chauchan	3	3	2	2	2	3	2
64	chandrakant bamane	3	2	3	2	3	3	3
65	A.N Gawande	3	3	3	3	3	3	2
66	Shaina durgappa chavan	2	2	2	2	2	2	2

POs & POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7
Average of Marks	2.67	2.62	2.64	2.50	2.65	2.61	2.58
Maximum Marks	3.00	3.00	3.00	3.00	3.00	3.00	3.00
Percentage of Average Marks	88.89	87.37	87.88	83.33	88.38	86.87	85.86

Smt Indira Gandhi College of Engineering

RES Club Seminar on "FPGA IMPLEMENTATION OF RNN FOR SOLAR INVERTERS"

PO Based Feedback Analysis

Feedback Form (As per POs) [Learn professional ethics and responsibilities (PO 8)]	Feedback Form (As per POs) [Learn about Individual and team work (PO 9)]	Feedback Form (As per POs) [Learn effective communication (PO 10)]	Feedback Form (As per POs) [Learn engineering and management principles (PO 11)]	Feedback Form (As per POs) [Ability to engage in independent and life-long learning (PO 12)]	Feedback Form (As per POs) [Ability to understand the concept and application of Electrical machines, power systems and control system (PSO 1)]	Feedback Form (As per POs) [Ability to assess the performance of Electrical system to maintain it's functioning. (PSO 2)]	Feedback Form (As per POs) [Aspire to work in team to execute engineering activities in society (PSO 3)]
2	3	2	3	3	3	2	3
2	3	2	3	3	3	3	2
3	2	3	2	3	2	3	2
3	3	3	3	3	3	3	3
1	2	1	2	2	2	2	3
3	3	3	3	3	3	3	3
3	2	3	2	3	2	3	3
3	3	3	3	3	3	3	3
3	2	3	2	3	2	3	3
3	3	3	3	3	3	3	3
3	3	3	3	3	3	3	3
3	3	3	3	3	3	3	3
3	3	3	3	3	3	3	3
3	3	2	3	3	3	3	3
2	3	2	3	2	3	2	3
3	3	3	3	3	3	3	3
3	3	3	3	3	3	3	3
3	3	3	3	3	3	3	3
3	3	3	2	3	3	3	3
3	3	2	3	3	3	3	3
3	2	3	3	3	3	3	3
2	2	3	3	3	3	3	2
2	2	2	2	2	2	2	2

PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
2.59	2.58	2.58	2.62	2.70	2.67	2.71	2.64
3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
86.36	85.86	85.86	87.37	89.90	88.89	90.40	87.88

"Renewable Energy Sources" Club SIGCE

(Ansari Mohd).

"FPGA IMPLEMENTATION OF RNN FOR SOLAR INVERTERS " Seminar Quiz 2024-25

S.I.G.C.E / Electrical Engineering Department / Renewable Energy Sources Club /A.Y 2024-25

* Indicates required question

1. Email *

2. Full Name *

3. Name of the College *

4. Gender *

   Mark only one oval.

   - Male
   - Female

5. Class *

   Mark only one oval.

   - SE Electrical Sem III
   - TE Electrical Sem V
   - BE Electrical Sem VII
   - Faculty

6. Mobile Number *

7. Email *

8. Profession *

   Mark only one oval.

   - Student
   - Faculty

9. Q1) Are FPGA applications specific? * 2 points

   Mark only one oval.

   - True
   - False
   - Can not say

10. Q2) What is the full form of VHDL? *

2 points

Mark only one oval.

- VHSIC Hardware Description Language
- Very High-level Hardware Description Language
- Verilog Hardware Description Language

11. Q3) Which is one way to detect counterfeit PCBs? *

2 points

Mark only one oval.

- Transient response analysis
- Using multimeter
- Logic based analysis

12. Q4) Full form of PWM. *

2 points

Mark only one oval.

- Power metering
- Pulse width Metering
- Pulse Width Modulation

13. Q5) Which one of these is numbering system **representation**? *

2 points

Mark only one oval.

- Floating Point & Fix Point numbers
- Logical numbers
- Logarithmic Number system

14. Q6) What is the full form of GPU? *

2 points

Mark only one oval.

- General Purpose Units
- Graphical User Interface
- Graphic processing unit

15. Q7) Is RNN part of AI? *

2 points

Mark only one oval.

- True
- False
- Can not say

16. Q8) Counterfeit and Cloning are same? *

2 points

Mark only one oval.

- True
- False
- Can not say

17. Q9) PWM can be a method to detect counterfeiting inverters. *

2 points

Mark only one oval.

- True
- False
- Can not say

18. Q10) Purpose of DC-DC buck conveters. * 2 points

Mark only one oval.

- DC-DC
- DC-AC
- Both A and B

This content is neither created nor endorsed by Google.

Google Forms

Smt Indira Gandhi College of Engineering

RES Club Seminar on "FPGA IMPLEMENTATION OF RNN FOR SOLAR INVERTERS"

Quiz Analysis

Sr.No.	Full Name	Q1) Are FPGA applications specific?	Q2) What is the full form of VHDL?	Q3) Which is one way to detect counterfeit PCBs?	Q4) Full form of PWM.	Q5) Which one of these is numbering system representation?
1	More Vishalakshi Baburao	TRUE	Hardware Description L	ansient response analy	Pulse Width Modulatio	ng Point & Fix Point nu
2	Bhumika Ankush Raut	Can not say	Hardware Description L	ansient response analy	Pulse Width Modulatio	ng Point & Fix Point nu
3	Tanvi Ananda Parte	TRUE	Hardware Description L	ansient response analy	Pulse Width Modulatio	ng Point & Fix Point nu
4	Ashish more	TRUE	Hardware Description L	Using multimeter	Pulse Width Modulatio	ng Point & Fix Point nu
5	Sangram jadhav	TRUE	Hardware Description L	ansient response analy	Pulse Width Modulatio	garithmic Number syste
6	ATHARVA NARENDRA KHANDE	FALSE	Hardware Description L	Logic based analysis	Pulse Width Modulatio	ng Point & Fix Point nu
7	Om Bishnu Palata	TRUE	Hardware Description L	Using multimeter	Pulse Width Modulatio	ng Point & Fix Point nu
8	Vaibhavi Ajay Taras	TRUE	vel Hardware Descriptio	Logic based analysis	Pulse Width Modulatio	garithmic Number syste
9	MEET VIJAY BHATT	TRUE	Hardware Description L	Using multimeter	Pulse Width Modulatio	ng Point & Fix Point nu
10	VINAY JAGDISH KOSHTI	FALSE	Hardware Description L	Logic based analysis	Pulse Width Modulatio	ng Point & Fix Point nu
11	Kunal Devendra Patil	FALSE	Hardware Description L	ansient response analy	Pulse Width Modulatio	ng Point & Fix Point nu
12	Onkar Rajendra Chavan	FALSE	Hardware Description L	ansient response analy	Pulse Width Modulatio	ng Point & Fix Point nu
13	ATHARV RAJESH POL	FALSE	Hardware Description L	ansient response analy	Pulse Width Modulatio	ng Point & Fix Point nu
14	Rohit. K. Gavit	FALSE	Hardware Description L	ansient response analy	Pulse Width Modulatio	garithmic Number syste
15	Nikhil Vilas Chavan	FALSE	Hardware Description L	ansient response analy	Pulse Width Modulatio	ng Point & Fix Point nu
16	Nagaraj Bhimashankar Ambalgi	FALSE	Hardware Description L	ansient response analy	Pulse Width Modulatio	garithmic Number syste
17	Avantika Ganesh Pol	TRUE	Hardware Description L	Using multimeter	Pulse Width Modulatio	ng Point & Fix Point nu
18	S LIPSA RAVINDRA REDDY	TRUE	Hardware Description L	Using multimeter	Pulse Width Modulatio	ng Point & Fix Point nu
19	Tushar shinde	FALSE	Hardware Description L	ansient response analy	Pulse Width Modulatio	ng Point & Fix Point nu
20	Bhadane Heemanshi Sudhakar	FALSE	Hardware Description L	ansient response analy	Pulse Width Modulatio	ng Point & Fix Point nu
21	Hrutuja Shriram Gurav	FALSE	Hardware Description L	ansient response analy	Pulse Width Modulatio	ng Point & Fix Point nu
22	Shravastee thakur	FALSE	Hardware Description L	ansient response analy	Pulse Width Modulatio	ng Point & Fix Point nu
23	Srushti Patil	FALSE	Hardware Description L	ansient response analy	Pulse Width Modulatio	ng Point & Fix Point nu
24	Snigdha Sanjay Kadam	FALSE	Hardware Description L	ansient response analy	Pulse Width Modulatio	ng Point & Fix Point nu
25	Nikita Nitin Bhosale	FALSE	Hardware Description L	ansient response analy	Pulse Width Modulatio	ng Point & Fix Point nu
26	Chalke Disha Pandurang	TRUE	Hardware Description L	ansient response analy	Pulse Width Modulatio	ng Point & Fix Point nu
27	Vaishnavi Navnath Jadhav	FALSE	Hardware Description L	ansient response analy	Pulse Width Modulatio	ng Point & Fix Point nu
28	Sayli Anandrao Patil	FALSE	Hardware Description L	ansient response analy	Pulse Width Modulatio	ng Point & Fix Point nu
29	Bhavana Sandeep Dhamankar	Can not say	Hardware Description L	ansient response analy	Pulse Width Modulatio	ng Point & Fix Point nu
30	Barhate Piyush Dinkar	FALSE	Hardware Description L	ansient response analy	Pulse Width Modulatio	ng Point & Fix Point nu
31	Sumit Kaushal	FALSE	Hardware Description L	ansient response analy	Pulse Width Modulatio	ng Point & Fix Point nu
32	VINEET BHADRA	TRUE	Hardware Description L	ansient response analy	Pulse Width Modulatio	ng Point & Fix Point nu
33	Yash Nitin Bagul	FALSE	Hardware Description L	ansient response analy	Pulse Width Modulatio	ng Point & Fix Point nu
34	Kaushik parshuram gawade	FALSE	Hardware Description L	ansient response analy	Pulse Width Modulatio	ng Point & Fix Point nu
35	Aminisha Kamalakar Natekar	FALSE	Hardware Description L	ansient response analy	Pulse Width Modulatio	ng Point & Fix Point nu
36	Manasvi Dinesh More	TRUE	Hardware Description L	Using multimeter	Pulse Width Modulatio	ng Point & Fix Point nu
37	Kiran ramkishan muknar	FALSE	Hardware Description L	ansient response analy	Pulse Width Modulatio	ng Point & Fix Point nu
38	Aayush Dwivedi	FALSE	Hardware Description L	Using multimeter	Pulse Width Modulatio	ng Point & Fix Point nu
39	Suyog Sudhakar Ghadi	FALSE	Hardware Description L	ansient response analy	Pulse Width Modulatio	ng Point & Fix Point nu
40	Ritesh Rajendra jadhav	FALSE	Hardware Description L	ansient response analy	Pulse Width Modulatio	ng Point & Fix Point nu
41	Vinayak Naresh Shinde	FALSE	Hardware Description L	ansient response analy	Pulse Width Modulatio	ng Point & Fix Point nu

Smt Indira Gandhi College of Engineering

RES Club Seminar on "FPGA IMPLEMENTATION OF RNN FOR SOLAR INVERTERS"

Quiz Analysis

Q6) What is the full form of GPU?	Q7) Is RNN part of AI?	Q8) Counterfeit and Cloning are same?	Q9) PWM can be a method to detect counterfeiting inverters	Q10) Purpose of DC-DC buck converters.	Score
General Purpose Units	TRUE	TRUE	TRUE	DC-DC	14 / 20
Graphic processing unit	TRUE	TRUE	TRUE	DC-DC	16 / 20
Graphic processing unit	TRUE	TRUE	TRUE	DC-DC	16 / 20
General Purpose Units	TRUE	FALSE	TRUE	Both A and B	12 / 20
Graphic processing unit	TRUE	Can not say	FALSE	DC-DC	10 / 20
Graphic processing unit	TRUE	TRUE	TRUE	Both A and B	18 / 20
Graphic processing unit	TRUE	FALSE	TRUE	DC-DC	12 / 20
Graphic processing unit	TRUE	FALSE	TRUE	DC-DC	8 / 20
Graphic processing unit	TRUE	TRUE	TRUE	DC-DC	14 / 20
Graphic processing unit	TRUE	FALSE	TRUE	Both A and B	16 / 20
Graphic processing unit	TRUE	FALSE	TRUE	Both A and B	18 / 20
Graphic processing unit	TRUE	TRUE	TRUE	Both A and B	20 / 20
Graphic processing unit	TRUE	TRUE	TRUE	Both A and B	20 / 20
Graphic processing unit	TRUE	TRUE	TRUE	Both A and B	18 / 20
Graphic processing unit	TRUE	TRUE	TRUE	Both A and B	20 / 20
Graphic processing unit	TRUE	Can not say	TRUE	Both A and B	16 / 20
Graphic processing unit	TRUE	FALSE	TRUE	DC-DC	12 / 20
Graphic processing unit	TRUE	FALSE	TRUE	DC-DC	12 / 20
Graphic processing unit	TRUE	TRUE	TRUE	Both A and B	20 / 20
Graphic processing unit	TRUE	TRUE	TRUE	Both A and B	20 / 20
Graphic processing unit	TRUE	TRUE	TRUE	Both A and B	20 / 20
Graphic processing unit	TRUE	TRUE	TRUE	DC-AC	18 / 20
Graphic processing unit	TRUE	TRUE	TRUE	DC-AC	18 / 20
Graphic processing unit	TRUE	TRUE	TRUE	Both A and B	20 / 20
Graphic processing unit	TRUE	TRUE	TRUE	Both A and B	20 / 20
General Purpose Units	TRUE	TRUE	TRUE	Both A and B	16 / 20
Graphic processing unit	TRUE	TRUE	TRUE	Both A and B	20 / 20
Graphic processing unit	TRUE	TRUE	TRUE	Both A and B	20 / 20
Graphic processing unit	TRUE	TRUE	TRUE	Both A and B	18 / 20
Graphic processing unit	TRUE	TRUE	TRUE	Both A and B	20 / 20
Graphic processing unit	TRUE	TRUE	TRUE	Both A and B	20 / 20
Graphic processing unit	TRUE	TRUE	TRUE	Both A and B	18 / 20
Graphic processing unit	TRUE	TRUE	TRUE	Both A and B	20 / 20
Graphic processing unit	TRUE	TRUE	TRUE	Both A and B	20 / 20
Graphic processing unit	TRUE	TRUE	TRUE	Both A and B	20 / 20
General Purpose Units	TRUE	FALSE	TRUE	DC-DC	10 / 20
Graphic processing unit	TRUE	TRUE	TRUE	Both A and B	20 / 20
Graphic processing unit	TRUE	TRUE	TRUE	Both A and B	18 / 20
Graphic processing unit	TRUE	TRUE	TRUE	Both A and B	20 / 20
Graphic processing unit	TRUE	TRUE	TRUE	Both A and B	20 / 20
Graphic processing unit	TRUE	TRUE	TRUE	Both A and B	20 / 20

Smt Indira Gandhi College of Engineering

RES Club Seminar on "FPGA IMPLEMENTATION OF RNN FOR SOLAR INVERTERS"

Quiz Analysis

Sr.No.	Full Name	Q1) Are FPGA applications specific?	Q2) What is the full form of VHDL?	Q3) Which is one way to detect counterfeit PCBs?	Q4) Full form of PWM.	Q5) Which one of these is numbering system representation?
42	Rohit Gadhe	FALSE	Hardware Description L	ansient response analy	Pulse Width Modulation	ng Point & Fix Point nu
43	Aniket Bhandkoli	TRUE	Hardware Description L	ansient response analy	Pulse Width Modulation	ng Point & Fix Point nu
44	Shubham sonawane	FALSE	Hardware Description L	ansient response analy	Pulse Width Modulation	ng Point & Fix Point nu
45	Jay Nandkumar Patil	FALSE	Hardware Description L	ansient response analy	Pulse Width Modulation	ng Point & Fix Point nu
46	Vivek Vilas Dhaygude	FALSE	Hardware Description L	ansient response analy	Pulse Width Modulation	ng Point & Fix Point nu
47	Aniket jadhav	TRUE	Hardware Description L	ansient response analy	Pulse Width Modulation	ng Point & Fix Point nu
48	Satishkumar gupta	TRUE	Hardware Description L	ansient response analy	Pulse Width Modulation	ng Point & Fix Point nu
49	Shivam Rajendra Yadav	FALSE	Hardware Description L	ansient response analy	Pulse Width Modulation	ng Point & Fix Point nu
50	Shreyas Dayanand Sawant	Can not say	Hardware Description L	ansient response analy	Pulse Width Modulation	ng Point & Fix Point nu
51	Akash Vishwas Mane	TRUE	Hardware Description L	ansient response analy	Pulse Width Modulation	ng Point & Fix Point nu
52	Samarth Sanjay Rane	FALSE	Hardware Description L	ansient response analy	Pulse Width Modulation	ng Point & Fix Point nu
53	Ansari Mohd Mubashshir Mohd Y	FALSE	Hardware Description L	ansient response analy	Pulse Width Modulation	ng Point & Fix Point nu
54	Shaina durgappa chavan	FALSE	Hardware Description L	ansient response analy	Pulse Width Modulation	ng Point & Fix Point nu
55	Deep Laxman Satam	FALSE	Hardware Description L	ansient response analy	Pulse Width Modulation	ng Point & Fix Point nu
56	Mohd Khursheed Alam	TRUE	vel Hardware Descripti	Using multimeter	Pulse Width Modulation	ng Point & Fix Point nu
57	Chandrashekhar Chaudhari	FALSE	Hardware Description L	ansient response analy	Pulse Width Modulation	ng Point & Fix Point nu
58	Sarika Sandeep Matey	TRUE	vel Hardware Descripti	Logic based analysis	Pulse Width Modulation	ng Point & Fix Point nu
59	Anushree Deepak Thakur	FALSE	Hardware Description L	Logic based analysis	Pulse Width Modulation	ng Point & Fix Point nu
60	Pawar Udaysinh V.	FALSE	Hardware Description L	ansient response analy	Pulse Width Modulation	ng Point & Fix Point nu
61	Sangita Nitin Chaudhari	FALSE	Hardware Description L	ansient response analy	Pulse Width Modulation	ng Point & Fix Point nu
62	Chandrakant Shankar Bamane	FALSE	Hardware Description L	ansient response analy	Pulse Width Modulation	ng Point & Fix Point nu
63	Utkarsha pawar	TRUE	Hardware Description L	ansient response analy	Pulse Width Modulation	garithmic Number syste
64	Nishant B Joshi	TRUE	vel Hardware Descripti	ansient response analy	Pulse Width Modulation	ng Point & Fix Point nu
65	Janhavi dnyaneshwar kadu	FALSE	Hardware Description L	ansient response analy	Pulse Width Modulation	ng Point & Fix Point nu
66	A N.Gawande	TRUE	Hardware Description L	ansient response analy	Power metering	Logical numbers

	CO3	CO3	CO6	CO1	CO2
Average of Correct Answers	1.27	1.85	1.61	1.97	1.82
Maximum Marks	2.00	2.00	2.00	2.00	2.00
Percentage of Average Marks	63.64	92.42	80.30	98.48	90.91

COs	Q1 (CO3)	Q2 (CO3)	Q3 (CO6)	Q4 (CO1)	Q5 (CO2)
CO1				98.48	
CO2					90.91
CO3	63.64	92.42			
CO4					
CO5					
CO6			80.30		

Male/Female
42/24

BE/TE/SE/Faculty
8/38/10/10

Smt Indira Gandhi College of Engineering

RES Club Seminar on "FPGA IMPLEMENTATION OF RNN FOR SOLAR INVERTERS"

Quiz Analysis

Q6) What is the full form of GPU?	Q7) Is RNN part of AI?	Q8) Counterfeit and Cloning are same?	Q9) PWM can be a method to detect counterfeiting inverters.	Q10) Purpose of DC-DC buck converters.	Score
Graphic processing unit	TRUE	TRUE	TRUE	DC-AC	18 / 20
Graphic processing unit	TRUE	TRUE	TRUE	DC-AC	16 / 20
Graphic processing unit	TRUE	TRUE	TRUE	DC-AC	18 / 20
Graphic processing unit	TRUE	TRUE	TRUE	Both A and B	20 / 20
Graphic processing unit	TRUE	TRUE	TRUE	DC-AC	18 / 20
Graphic processing unit	TRUE	TRUE	TRUE	DC-DC	16 / 20
Graphical User Interface	TRUE	TRUE	FALSE	Both A and B	14 / 20
Graphic processing unit	TRUE	TRUE	TRUE	DC-AC	18 / 20
Graphic processing unit	TRUE	TRUE	TRUE	Both A and B	18 / 20
Graphic processing unit	TRUE	TRUE	TRUE	Both A and B	18 / 20
Graphic processing unit	TRUE	TRUE	TRUE	Both A and B	20 / 20
Graphic processing unit	TRUE	TRUE	TRUE	Both A and B	20 / 20
Graphic processing unit	TRUE	TRUE	TRUE	DC-AC	18 / 20
Graphic processing unit	TRUE	TRUE	TRUE	Both A and B	20 / 20
Graphical User Interface	TRUE	TRUE	TRUE	DC-DC	10 / 20
Graphic processing unit	TRUE	TRUE	TRUE	Both A and B	20 / 20
General Purpose Units	TRUE	TRUE	TRUE	DC-DC	10 / 20
Graphic processing unit	TRUE	TRUE	TRUE	DC-AC	16 / 20
Graphic processing unit	FALSE	TRUE	TRUE	DC-DC	16 / 20
Graphic processing unit	TRUE	TRUE	TRUE	DC-DC	18 / 20
Graphical User Interface	FALSE	TRUE	TRUE	Both A and B	16 / 20
Graphic processing unit	FALSE	TRUE	TRUE	Both A and B	14 / 20
General Purpose Units	TRUE	FALSE	TRUE	DC-DC	10 / 20
Graphic processing unit	TRUE	TRUE	TRUE	Both A and B	20 / 20
Graphical User Interface	TRUE	TRUE	TRUE	DC-DC	8 / 20

CO4	CO4	CO5	CO2	CO5
1.70	1.91	1.67	1.94	1.21
2.00	2.00	2.00	2.00	2.00
84.85	95.45	83.33	96.97	60.61

Q6 (CO4)	Q7 (CO4)	Q8 (CO5)	Q9 (CO2)	Q10 (CO5)	CO Average
					98.48
			96.97		93.94
					78.03
84.85	95.45				90.15
		83.33		60.61	71.97
					80.30

"Renewable Energy Sources" Club SIGCE

(Ansari Mohd).

JNIESTRT'S

SMT. INDIRA GANDHI COLLEGE OF ENGINEERING

GHANSOLI, NAVI MUMBAI – 400 701

(Approved by AICTE New Delhi & Govt. of Maharashtra, Affiliated to University of Mumbai)

Date :- 10th July 2024.

Letter of Appreciation

To,

Mr. Chanakya Hingu.

Research Assistant,

University of Nevada

Respected Sir,

Thank you so much for delivering an informative & thoughtful Seminar on "**FPGA IMPLEMENTATION OF RNN FOR SOLAR INVERTERS**" held on **10th July 2024**.

It was a really splendid presentation which exposed students to the actual implementation of these renewable energy sources to produce eco-friendly electricity at low operating cost.

We appreciate your effort for delivering Seminar & thankful for your support. For upcoming educational training events in future, we are looking forward for your cooperation.

Yours Sincerely,

Chanakya Hingu

Hingu

10/07/2024

(Principal)

Dr. Sunil S Chavan

CERTIFICATE

THIS ACKNOWLEDGES THAT

Mr. Chanakya Hingu

HAS SUCCESSFULLY DELIVERED SEMINAR ON

"FPGA IMPLEMENTATION OF RNN FOR SOLAR INVERTERS"

Organized by

"Renewable Energy Resources Club" OF

"ELECTRICAL ENGINEERING DEPARTMENT"

10TH JULY 2024
3:00 PM TO 5:00 PM

10-07-24.
(Prof Ansari Mohd)
(RES CLUB I/C)

(Prof N.R Joshi)
(H.O.D Electrical)

(Dr. Sunil Chavan)
(Principal)

Chanakya Hingu
10/7/2024

JNIESTRT'S

SMT. INDIRA GANDHI COLLEGE OF ENGINEERING

GHANSOLI, NAVI MUMBAI – 400 701

(Approved by AICTE New Delhi & Govt. of Maharashtra, Affiliated to University of Mumbai)

Guest Review on "Course Outcomes" based on Question & Answers session

Name of Expert Guest lecturer / Trainer : - Chanakya Hingu

Name of Industry / Organization :- Research Assistant: University of Nevada, Reno

Seminar Topic / STTP :- " **FPGA IMPLEMENTATION OF RNN FOR SOLAR INVERTERS**".

Seminar Date :- 10/07/2024 Duration :- 3:00 - 5:00pm

Course Outcomes	3 (High)	2 (Moderate)	1 (Low)
CO 1:- Understand the PWM technique in solar inverter.	✓		
CO 2:- Generate PWM signal for Solar inverter	✓		
CO 3:- Understand the basic concept of FPGA & RNN for solar inverter.	✓		
CO 4:- Analyze the implementation of RNN on Intel FPGA TR4 board.	✓		
CO 5:- Develop the hardware of solar inverter	✓		
CO 6:- Testing & result validation of Solar Inverter.	✓		

Hingu
10/7/24

Signature

(Expert Guest Lecturer / Industrial Expert Trainer)

Smt. Indira Gandhi College of Engineering, Ghansoli.
Department of Electrical Engineering

Workshop / FDP / Guest lecture Feedback

Date: 10/7/24.

Name of the event/activity: FPGA implementation of RNN for Solar Inverter

Date and duration of activity: 10/7/2024 ; 3:00-5:00 pm Participants: Staff/ Student

Name of participant (optional): Chaanakya Hingu

Mobile No.: 361-488-8191 E-mail chingu@umn.edu

Here are some of the points to facilitate you in giving feedback about our College and our students. You are requested to rate the following.

Rate the following facilities by putting values.

S.N.	Particulars	Poor (1)	Good(2)	Excellent(3)
1	The Presenter/ Presentation is effective			✓
2	Materials provided is useful			✓
3	Duration was sufficient			✓
4	Coverage of topics			✓

Curricular gaps filled (If any) through this activity: Yes ; RES & Power electronics

Rate the following facilities:

S.N.	Particulars	Low (1)	Medium(2)	High(3)
1	Laboratory infrastructure facility			✓
2	Laboratory Resources facilities (Equipments)			✓
3	Hospitality			✓
4	Laboratory Cleanliness			✓

Rate the following Program Outcomes (whichever applicable to the activity)

S.N.	Particulars	Related POs	Low (1)	Medium(2)	High(3)
1	Gain Engineering knowledge	PO1			✓
2	Gain knowledge about problem analysis	PO2			✓
3	Gain knowledge about design/development of solutions	PO3			✓
4	Gain knowledge about investigations of complex problems:	PO4		✓	
5	Gain knowledge about Modern tool usage	PO5			✓
6	Learn to apply reasoning to engineering and societal, health, safety, legal and cultural issues	PO6		✓	
7	Understand the impact of the professional engineering solutions to environment and sustainability	PO7		✓	

8	Learn professional ethics and responsibilities	PO8		✓	
9	Learn about Individual and team work	PO9		✓	
10	Learn effective communication	PO10			✓
11	Learn engineering and management principles	PO11		✓	
12	Ability to engage in independent and life-long learning	PO12			✓
13	Ability to understand the concept and application of Electrical machines, power systems and control system.	PSO1			✓
14	Ability to assess the performance of Electrical system to maintain it's functioning.	PSO2			✓
15	Aspire to work in team to execute engineering activities in society.	PSO3		✓	

Remarks (ifany)

Through the Seminar Students learn about RES in prespective of AI & FPGAs.

Tingu

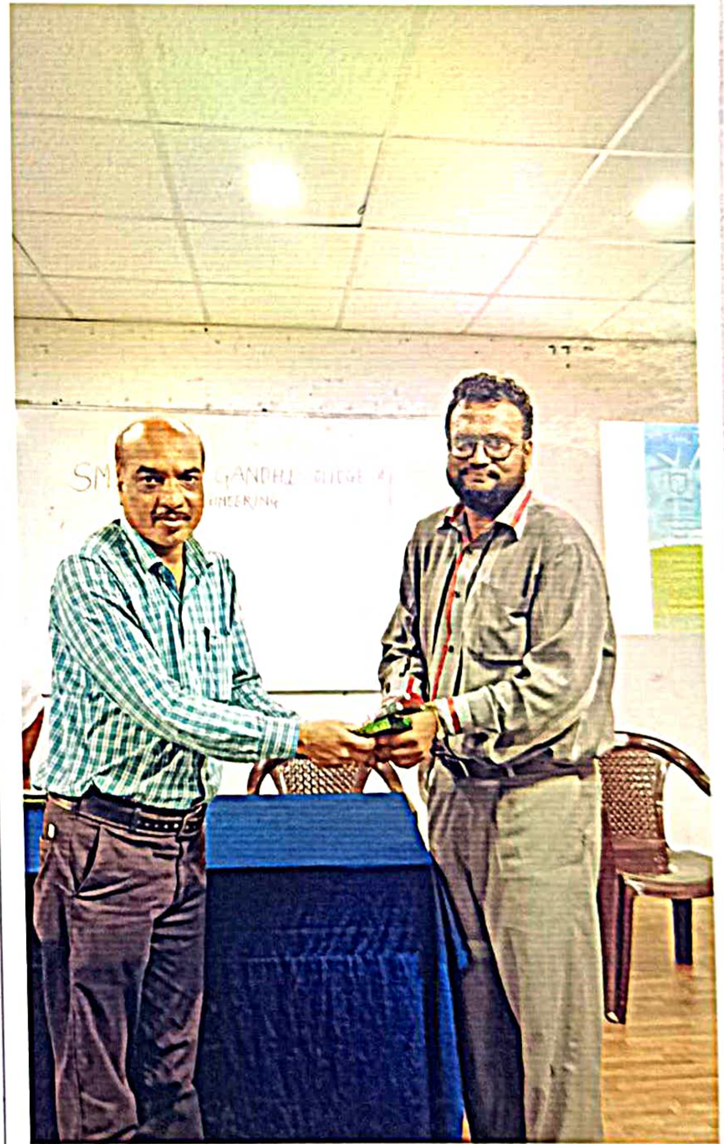
Signature

10/7/2024

Chanakya Tingu.

Thank you for your valuable feedback.


SMT INDIRA
COLLEGE OF




SMT INDIRA GANDHI COLLEGE OF
ENGINEERING
RES CLUB

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SMT. INDIRA GANDHI COLLEGE OF ENGINEERING

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Electrical Engineering Department

JNIESTRE'S

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