



POORNIMA

COLLEGE OF ENGINEERING

Promoted by Shanti Education Society, Affiliated to Rajasthan Technical University & Approved by AICTE

A REPORT ON ONE-WEEK WORKSHOP

- ◆ **TITLE AND DURATION:** “Current Trends in Solar and Wind Technologies” from January 20-24, 2021.
- ◆ **SPONSORS & SUPPORTERS:** Not applicable.
- ◆ **ORGANIZERS:** Department of Electrical Engineering, Poornima College of Engineering, Jaipur.
- ◆ **FLYER / POSTER:**

PCE ACADEMIC COMMITTEE

Mr. Pankaj Dhemla	Vice-Principal, PCE
Dr. Rekha Nair	Dean, I Year, PCE
Mr. Devendra Somvanshi	Registrar, PCE
Dr. Amit Shrivastava	Professor, PCE
Dr. Babita Jain	Professor, PCE
Dr. Deepika Chauhan	Professor, PCE
Dr. Himani Goyal Sharma	Professor, PCE
Dr. Neeraj Tiwari	Professor, PCE
Dr. Pravin M. Sonwane	Professor, PCE
Dr. Sunil Gupta	Professor, PCE
Dr. Virendra Sangtani	Professor, PCE
Dr. Vijay Kumar Gale	Associate Professor, PCE
Dr. Gaurav Jain	Assistant Professor, PCE
Dr. Gaurav Srivastava	Assistant Professor, PCE
Mr. Devendra Doda	Associate Professor, PCE
Mr. Brijraj Singh Solanki	Associate Professor, PCE
Ms. Ekata Sharma	Associate Professor, PCE
Mohammad Asif Iqbal	Associate Professor, PCE
Mr. Mahesh Kumar Meena	Assistant Professor, PCE
Mr. Mayank Sharma	Assistant Professor, PCE
Mr. Pankaj Gakhar	Assistant Professor, PCE
Mr. Abhishek Singh	Assistant Professor, PCE

REGISTRATION AND FEE PARTICULARS

- There is no registration fee for faculty from AICTE approved Institutions, Participants from Industry, and Research Scholars.
- Registration for the program may be done by filling the Registration Form online, Reg. Link: <https://tinyurl.com/ctsaw>
- Once you registered, you can add yourself in what's up group for updates with Link: <https://tinyurl.com/ctsawwhatsapp>

IMPORTANT DATES

Last date of online registration:	January 15, 2021
Intimation of selection by mail	January 17, 2021
Workshop duration	January 20-24, 2021

CORRESPONDENCE

Prof.(Dr.) Pravin Sonwane
Professor and Dy. Head (Academics),
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Prof.(Dr.) Virendra Sangtani
Professor and Head of Department
Department of Electrical Engineering, PCE, Jaipur
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Venue
Department of Electrical Engineering
POORNIMA
COLLEGE OF ENGINEERING
ISI-6, RIICO Institutional Area, Sitapura, Jaipur, Rajasthan 302022
www.pce.poornima.org

RESOURCE PERSONS

Prof. Bhim Singh	Professor, IIT, Delhi
Dr. Yogesh Sonwane	Assistant General Manager, Reliance Industries Limited, Mumbai
Dr. Ujjwal Kumar Kalia	Associate Professor, MANIT, Bhopal
Dr. Ajay Kumar Bansal	Dean, School of Engineering and Technology, Central University of Haryana
Dr. Seema Agrawal	Assistant Professor, RTU, Kota
Dr. Naveen Jain	Assistant Professor, CTAE, Udaipur
Dr. Ganesh P. Prajapat	Assistant Professor, Engineering College, Bikaner
Dr. Vinod Yadav	Assistant Professor, CTAE, Udaipur
Dr. Manoj Kumawat	Assistant Professor, NIT, Delhi
Dr. Kailash Sharma	Assistant Professor, Dr. B. R. Ambedkar National Institute of Technology Jalandhar, Punjab

ELIGIBILITY

This course is open to all Faculty Members of AICTE Approved Institutions, Research Scholars, and Persons working in R&D organizations or Industry. Number of participants for Workshop are limited. All the sessions will be conducted online only. Participant with minimum 80% attendance with feedback form are eligible for certificate.

RTU (ATU) TEQIP-III SPONSORED
One Week Workshop
on
CURRENT TRENDS IN SOLAR AND WIND TECHNOLOGIES (CTSAWT-2021)
January 20-24, 2021

Organized by
Rajasthan Technical University, Kota
&
Department of Electrical Engineering
POORNIMA
COLLEGE OF ENGINEERING
Affiliated to RTU, Kota • Approved by AICTE & UGC under 2(f) • Accredited by NBA

Dr. Mahesh Bunde
B.E., M.E., Ph.D.
Director
Poornima College of Engineering
ISI-6, RIICO Institutional Area
Sitapura, JAIPUR

ABOUT TEQIP-III

The Project, third phase of Technical Education Quality Improvement Programme (referred to as TEQIP-III) is fully integrated with the Twelfth Five-year Plan objectives for Technical Education as a key component for improving the quality of Engineering Education in existing institutions with a special consideration for Low Income States and Special Category States and support to strengthen few affiliated technical universities to improve their policy, academic and management practices.

RAJASTHAN TECHNICAL UNIVERSITY

Rajasthan Technical University (RTU) is located in Kota in the state of Rajasthan. It was established in 2006 by the Government of Rajasthan. The University currently affiliates about 129 Engineering Colleges, 4 B.Arch., 41 MCA Colleges, 95 MBA Colleges, 44 M.Tech. Colleges and 3 Hotel Management and Catering Institutes. The University aims to provide quality technical education which may help Rajasthan in its technical development and will boost technical environment in the country.

POORNIMA COLLEGE OF ENGINEERING

Poornima College of Engineering (PCE), established as a brand of technical education in the year 2000, has its own glorious legacy of leading the young engineers to the mammoth sky of success. Its accomplishments forecast its journey through the hardships and its triumph over them one after another. PCE left no stone unturned since its establishment in turning the glorious vision into unbelievable reality providing the platform for knowledge and research and their practical implementations in different engineering professional prospects. Glorious glimpses of PCE:

- Highly recognized and renowned affiliated technical institution all over Rajasthan with built up area more than 3.5 lacs square feet
- Affiliated to RTU, Kota & approved by AICTE, New Delhi
- The most preferred NBA Accredited Engineering College with running of six specializations of Engineering at UG Level (CSE, ECE, EE, ME, IT, CIV) and two at PG level (CS & VLSI)
- The only institution permitted by RTU to admit FN/PIQ/Gulf students & designated as centre of excellence by IBM

DEPARTMENT OF ELECTRICAL ENGINEERING

The Journey of Department of Electrical Engineering was started in year 2000. The department has intake of 120 students. We are providing all the amenities of infrastructure related to knowledge, research,

experiments and training of multiple professions. The department is regularly organizing various workshops, seminars, expert lectures in every session such as workshop on PLC SCADA, MATLAB, Renewable Energy, Industrial Automation, etc. The department has been taking initiatives for versatile enhancement of the students through technical, cultural and sports fests since the establishment. Most of our final year students have been placed in Infosys, Capgemini India Ltd., FACE, Gram Power, Adani Power, KSTPS, Pinnacle Infotech solutions, etc.

COURSE CONTENTS

Solar power is the conversion of energy from sunlight into electricity, either directly using photovoltaics, indirectly using concentrated solar power, or a combination. Concentrated solar power systems use lenses or mirrors and solar tracking systems to focus a large area of sunlight into a small beam. Various new trends and research are ongoing in this direction. Wind power or wind energy is the use of wind to provide mechanical power through wind turbines to turn electric generators for electrical power. Wind power is a popular sustainable, renewable source of power that has a much smaller impact on the environment compared to burning fossil fuels. Integration of these two energy sources has lot of research based scope in energy generation and hence attracting many research scholars in this field.

TOPICS TO BE COVERED

- Introduction to Green Energy System
- Control Applications to the Renewable Energy Systems
- Solar Photovoltaic Systems-Current Trends and Challenges
- Solar Parks Integration
- Topologies and Control of Wind Energy Conversion Systems
- Short Term Wind Forecasting using Statistical Models
- Wind Farm Layout Optimization
- Efficient Hybrid Energy System

OBJECTIVES OF THE WORKSHOP

- To equip teachers with skills and knowledge in the field of Renewable Energy. This is essential for inculcating learning values in students and guiding & monitoring their progress towards their career.
- To make the faculty members to train the students to create interest towards the field of current trends in solar and wind Energy and also familiarize the students with the practical aspects of this field and gradually teach them the industrial usage for the same.

WORKSHOP COMMITTEE

CHIEF PATRON

Prof. (Dr.) R. A. Gupta
Hon'ble Vice Chancellor, RTU Kota

PATRON

Prof. (Dr.) Dharendra Mathur
RTU (ATU) TEQIP-III Coordinator

Dr. Mahesh M. Bundeale
Principal & Director, Poornima College of Engineering

RTU EVENT COORDINATOR

Dr. M.L. Meena (RTU, Kota)
Dr. Seema Agrawal (RTU, Kota)
Dr. O.S. Prajapati (RTU, Kota)

RTU (ATU) TEQIP-III COMMITTEE

Dr. Harish Sharma	Nodal officer Academic
Prof. D. K. Sambariya	Nodal Officer Procurement
Dr. S. D. Purohit	Nodal Officer Finance
Dr. Irum Alvi	Conference
Mr. Santosh Sharma	Expert Lecture
Mr. Anshul Bansal	GATE & Induction
Mr. Dinesh Kumar	Workshop

HOST INSTITUTE COORDINATORS

Prof.(Dr.) Virendra Sanghani	Dept. of Electrical Engineering, PCE
Prof.(Dr.) Pravin Sonwane	Dept. of Electrical Engineering, PCE



◆ PROGRAM SCHEDULE:

S. No	Activity	Duration	Time
1	<p>Welcome of Dignitaries and Introduction of Workshop by Dr. Pravin Sonwane, Dy. HOD (Academic), Department of Electrical Engineering, PCE, Jaipur</p> <ul style="list-style-type: none"> Prof. R. A. Gupta, Hon'ble Vice Chancellor, RTU Kota (Chief Guest) Prof. (Dr.) Dharendra Mathur, RTU (ATU) TEQIP-III, Coordinator, RTU, Kota (Guest of Honour) Dr. M.L.Meena, RTU Event Coordinator, RTU, Kota Dr. Seema Agrawal, RTU Event Coordinator, RTU, Kota Dr. O.S.Prajapati, RTU Event Coordinator, RTU, Kota Ar. Rahul Singhi, Director, Poornima Group, Jaipur Dr. Mahesh Bundeale, Director & Principal, Poornima College of Engineering, Jaipur Er. Pankaj Dhemla, Vice-Principal, 	10 Min	10.00 AM-10.10 AM

	<p>Poornima College of Engineering, Jaipur</p> <ul style="list-style-type: none"> • Dr. Rekha Nair, Dean, I Year, Poornima College of Engineering, Jaipur • Dr. Virendra Sangtani, HOD, Department of Electrical Engineering, PCE, Jaipur 		
2	<p>Welcome Address by Dr. Mahesh Bundele, Director & Principal, Poornima College of Engineering, Jaipur</p>	05 Min	10.10 AM-10.15 AM
3	<p>Address by Ar. Rahul Singhi, Director, Poornima Group, Jaipur</p>	05 Min	10.15 AM-10.20 AM
4	<p>Introduction of Guest of Honour and Address by Guest of Honour (Prof. (Dr.) Dharendra Mathur, RTU (ATU) TEQIP-III, Coordinator, RTU, Kota)</p>	05 Min	10.20 AM-10.25 AM
5	<p>Introduction of Chief Guest & Inaugural Address by the Chief Guest Prof. (Dr.) R.A. Gupta, Hon'ble Vice Chancellor, RTU Kota</p>	10 Min	10.25 AM-10.35 AM
6	<p>Vote of Thanks by Dr. Virendra Sangtani, HOD, Department of Electrical Engineering, PCE, Jaipur</p>	05 Min	10.35 AM-10.40 AM

Programme Outline	
Wednesday, Day 1: 20 January, 2021	
10.00 am – 10.40 am	<p style="text-align: center;"><u>Inaugural Function</u></p> <p>Welcome of Dignitaries and Introduction of Workshop by Dr. Pravin Sonwane, Dy. HOD (Academic), Department of Electrical Engineering, PCE, Jaipur</p> <ul style="list-style-type: none"> • Prof. R. A. Gupta, Hon'ble Vice Chancellor, RTU Kota (Chief Guest) • Prof. (Dr.) Dharendra Mathur, RTU (ATU) TEQIP-III, Coordinator, RTU, Kota (Guest of Honour) • Dr. M.L. Meena, RTU Event Coordinator, RTU, Kota • Dr. Seema Agrawal, RTU Event Coordinator, RTU, Kota • Dr. O.S. Prajapati, RTU Event Coordinator, RTU, Kota • Ar. Rahul Singh, Director, Poornima Group, Jaipur • Dr. Mahesh Bunde, Director & Principal, Poornima College of Engineering, Jaipur • Er. Pankaj Dhemla, Vice-Principal, Poornima College of Engineering, Jaipur • Dr. Rekha Nair, Dean, I Year, Poornima College of Engineering, Jaipur • Dr. Virendra Sangtani, HOD, Department of Electrical Engineering, PCE, Jaipur
11.00 am -12.30 pm	<p style="text-align: center;"><u>Session-1</u></p> <p>Topic: Solar Photovoltaic Power Generation Resource Person: Prof. Bhim Singh, Professor, IIT, Delhi</p>
12.30 pm -02.00 pm	BREAK
02.00 pm -03.30 pm	<p style="text-align: center;"><u>Session-2</u></p> <p>Topic: Power Converters and their simulation for wind and solar power applications Resource Person: Dr. Vinod Yadav, Assistant Professor, CTAE, Udaipur</p>

Programme Outline	
Thursday, Day 2: 21 January, 2021	
10.00 am -11.30 am	<p style="text-align: center;"><u>Session-3</u></p> <p>Topic: An overview of hybrid energy system and their sizing Resource Person: Dr. Ajay Kumar Bansal, Associate Professor, School of Engineering and Technology, Central University of Haryana</p>
12.30 pm -02.00 pm	BREAK

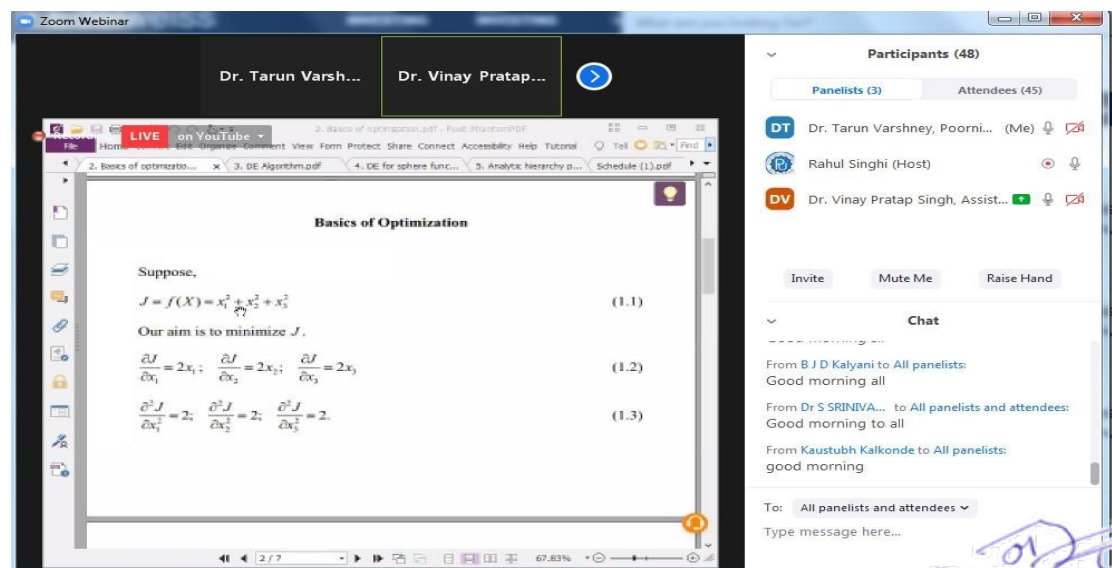
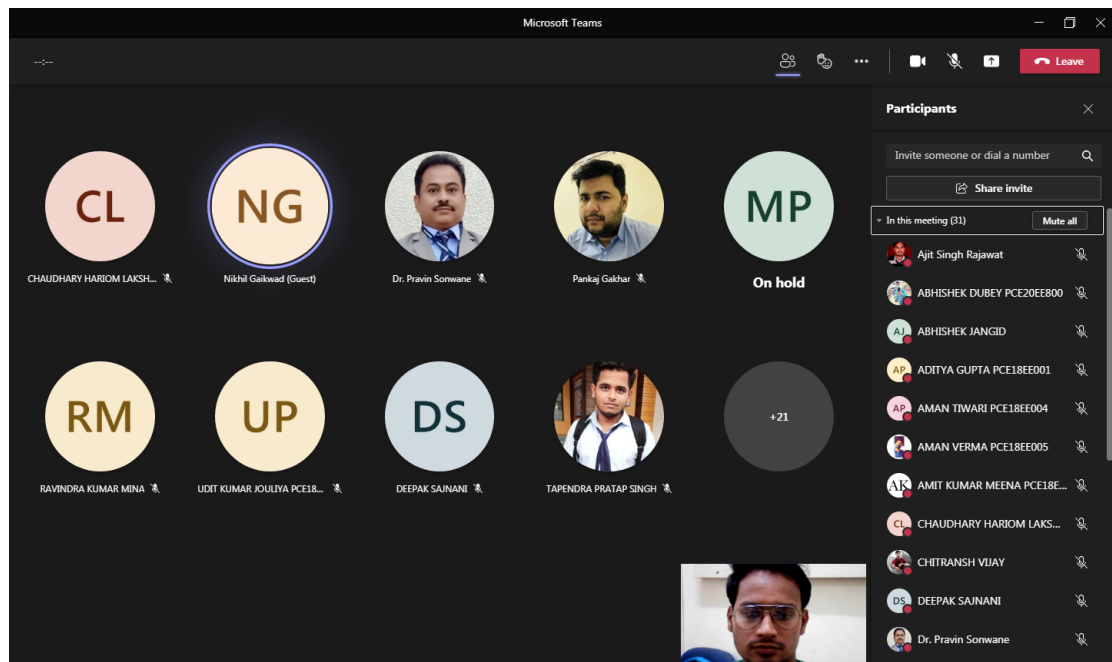
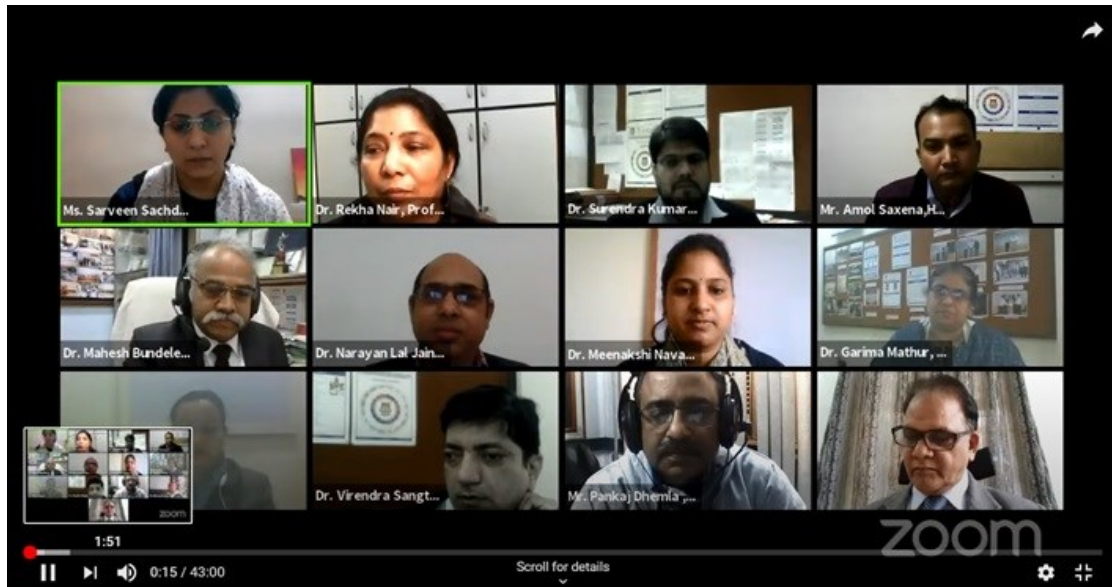
02.00 pm -03.30 pm	<p align="center"><u>Session-4</u></p> <p>Topic: Modeling, Control and small signal analysis of DFIG based wind power system</p> <p>Resource Person: Dr. Ganesh P. Prajapat, Assistant Professor, Engineering College, Bikaner</p>
Programme Outline	
Friday, Day 3: 22 January, 2021	
10.00 am -11.30 am	<p align="center"><u>Session-5</u></p> <p>Topic: Planning of intermittent energy sources in distribution system</p> <p>Resource Person: Dr. Naveen Jain, Assistant Professor, CTAE, Udaipur</p>
12.30 pm -02.00 pm	BREAK
02.00 pm -03.30 pm	<p align="center"><u>Session-6</u></p> <p>Topic: Implementation of Power Quality Improvement circuit for Isolated Solar Photovoltaic Power Generation System</p> <p>Resource Person: Dr. SeemaAgrawal, Assistant Professor, RTU, Kota</p>

Programme Outline	
Sunday, Day 5: 24 January, 2021	
10.00 am -11.30 am	<p align="center"><u>Session-10</u></p> <p>Topic: Solar Energy: Industrial Approach</p> <p>Resource Person: Dr. YogeshSonwane, Assistant General Manager, Reliance Industries Limited, Mumbai</p>






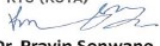


♦ DETAILS OF RESOURCE PERSON(S):

1. Prof. Bhim Singh, Professor, IIT, Delhi
2. Dr. VinodYadav, Assistant Professor, CTAE, Udaipur
3. Dr. Ajay Kumar Bansal, Associate Professor, School of Engineering and Technology, Central University of Haryana
4. Dr. Ganesh P. Prajapat, Assistant Professor, Engineering College, Bikaner
5. Dr. Naveen Jain, Assistant Professor, CTAE, Udaipur
6. Dr. SeemaAgrawal, Assistant Professor, RTU, Kota
7. Dr. Kailash Sharma, Assistant Professor, Dr. B. R. Ambedkar National Institute of Technology Jalandhar,Punjab
8. Dr. Ujjwal Kumar Kalla, Associate Professor, MANIT, Bhopal
9. Dr. ManojKumawat, Assistant Professor, NIT, Delhi
10. Dr. YogeshSonwane, Assistant General Manager, Reliance Industries Limited, Mumbai

◆ GLIMPSES OF CONTENT DELIVERY:



♦ **CERTIFICATE FORMAT:**

	<p>TEQIP-III Sponsored Workshop on <i>Current Trends in Solar and Wind Technologies</i> (CTSAWT-2021) Organised By Rajasthan Technical University, Kota Poornima College of Engineering, Jaipur</p>	
Ref No./20157/		
<h2 style="text-align: center;">Certificate</h2>		
<p>This is to certify that <u>Dr./Mr./Ms.</u> of _____ has participated in the Workshop on "<i>Current Trends in Solar and Wind Technologies</i>" held from <u>16/01/2021</u> to <u>20/01/2021</u> at "<i>Poornima College of Engineering</i>".</p>		
 Dr. M.L. Meena RTU (KOTA)	 Dr. Seema Agrawal RTU (KOTA)	 Dr. O.S. Prajapati RTU (KOTA)
 Dr. Pravin Sonwane EED, PCE, Jaipur	 Dr. Virendra Sangtani EED, PCE, Jaipur	 Dr. Mahesh M. Bunde Director & Principal, PCE, Jaipur


Dr. Mahesh Bunde
B.E., M.E., Ph.D.
Director
Poornima College of Engineering
ISI-0, FIICO Institutional Area
Simpura, JAIPUR

♦ **LIST OF PARTICIPANTS:**

S.No.	Name
1	Dr. Deepika Chauhan
2	Gaurav Jain
3	Kartavya Jain (Guest)
4	SURENDER KUMAR
5	ACHAL SINGHAL
6	KARAN JANGID
7	NIDHI SINGH BUNKER
8	NIDHI SINGH BUNKER
9	ABHISHEK KUMAR
10	ABHISHEK DUBEY
11	VIVEK YADAV
12	ANKIT MALI
13	MEENAKSHI RATNAWAT
14	MOHAMMAD RIZWAN
15	KANHAIYA LAL
16	MAYANK YADAV
17	NAVNEET KUMAR SAINI
18	KESHAV KUMAR SHARMA
19	KANAK PAREEK
20	SANEY THAKUR
21	HARSHVARDHAN SHRINGI
22	HARSHVARDHAN SHRINGI
23	VISHNU MAHAWAR
24	HARSHIT KUMAR MEHARCHANDANI
25	CHAUDHARY HARIOM LAKSHMIKANT
26	GARVIT KHANDELWAL
27	GARVIT KHANDELWAL
28	ANKIT MAAN
29	Ajay Soni
30	KHUSHI VERMA
31	MANSI BARDAWAT
32	MANSI BARDAWAT
33	YUVRAJ SINGH
34	ASHISH MEENA
35	JATIN AGARWAL
36	SUNIL MEENA
37	GARVIT JANGID
38	DIVYANSH SHARMA
39	AYUSH GUPTA
40	MOHIT JOSHI