ShramSadhana Bombay Trust's

COLLEGE OF ENGINEERING AND TECHNOLOGY

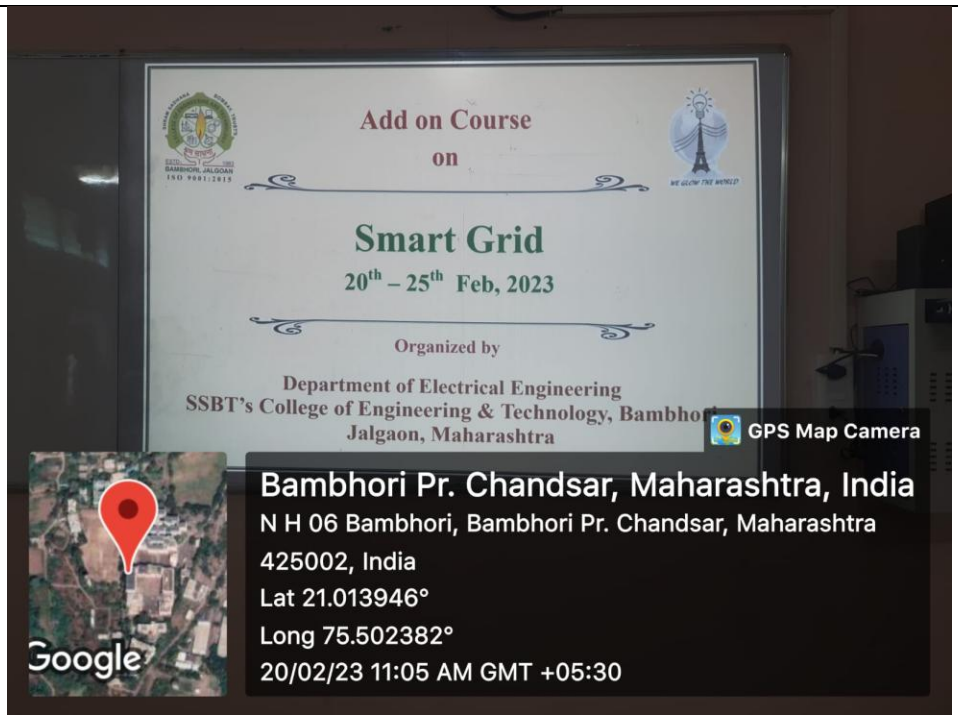
Bambhori, Post Box No. 94, Jalgaon-425001 (M.S.)

Department of Electrical Engineering

Brief Report on

Add-On Course on "Smart Grid"

Title of Course	**Add-On Course on "Smart Grid"**
Date and Venue/ Location	**20^{thth} to 25thFeb 2023 (30 Hours Duration)** Department of Electrical Engineering
Aim/Purpose	The purpose of Add-On Course to provide career oriented course and bridge the gap curriculum. The aim of the program is to disseminate knowledge about Smart Electric Grid and its future scope. Economical and Environment impact of Smart Electric Grid.
Objectives	To provide students with a working knowledge of fundamentals and development of Smart Electric Grid, from the basic concepts of power systems.
Participants Profile	This course is intended for graduate students but it is also open to senior undergraduate students. There is no official pre-requisite at the time of enrolment. However, basic knowledge of power systems, basic knowledge of computer and communications networks, and some background in probability and random variables, linear algebra, and convex optimization will be helpful.
Participants	66
Description about the program	This course mainly focuses on background and fundamental building blocks of smart grid with stringent emphasis on practical applications in the existing power system network. This course provides overview of smart grid and its potential in deferent type of power sectors s u c h as power generation, transmission a n d distribution i n Metro, Urban/Semi urban and remote locations of India. This also emphasizes on renewable energy source integration in present grids as well as in micro and nano grids as part of the course and explores its issues in operation, analysis, management, control, protection and monitoring. In addition to it, this further provides detailed utility level analysis in terms of energy management, network analysis and operation of renewable based smart grids.

Outcome	After successful completion of this course the student will be able to: 1. Understand the fundamental element of the smart grid and power grid. 2. Understand different communication technologies used in smart grids. 3. Get accustomed with the fundamentals of SCADA and IED 4. Understand the Importance of Automation in Substation and substation Automation. 5. Understand the Energy management systems in era of smart grid. 6. Understand the distribution automation for smart grid development.
Contents	Introduction to Smart Grid l & ll, Architecture of Smart Grid System, Standards for Smart Grid System Elements and Technologies of Smart Grid System , Elements and Technologies of Smart Grid System-II Distributed Generation Resources-I, ll, lll & lV ,Wide Area Monitoring Systems-I & ll, Phasor Estimation-I &l l, Digital relays for Smart Grid Protection , Islanding Detection Techniques-I, ll, lll & lV, Smart Grid Protection-I.
Photos	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425002, India
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Google


Smart Grid
GPS Map Camera
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425002, India
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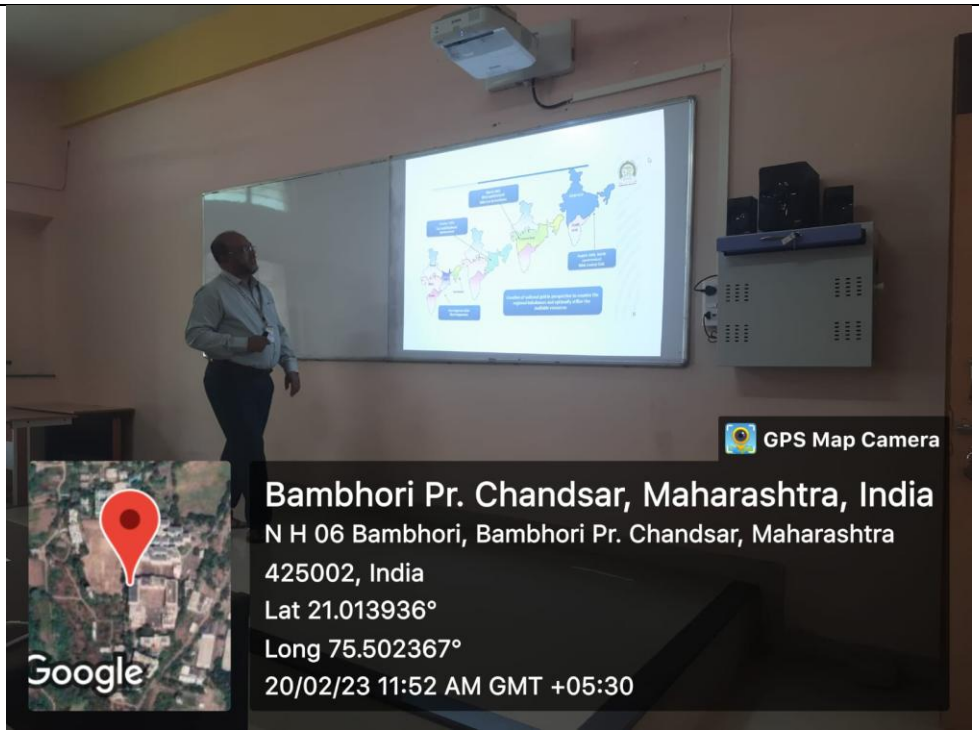
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425002, India
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ENERGY
2020 Smart
Grid System
Report
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425002, India
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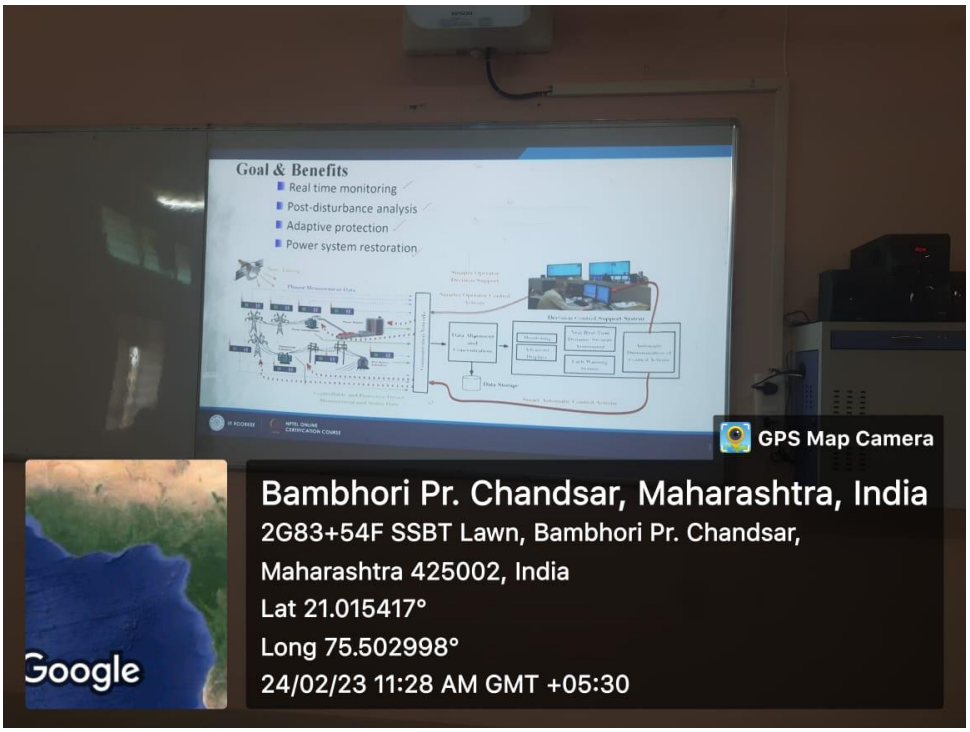
Goal & Benefits
Real time monitoring
Post-disturbance analysis
Adaptive protection
Power system restoration
GPS Map Camera
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Maharashtra 425002, India
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24/02/23 11:28 AM GMT +05:30
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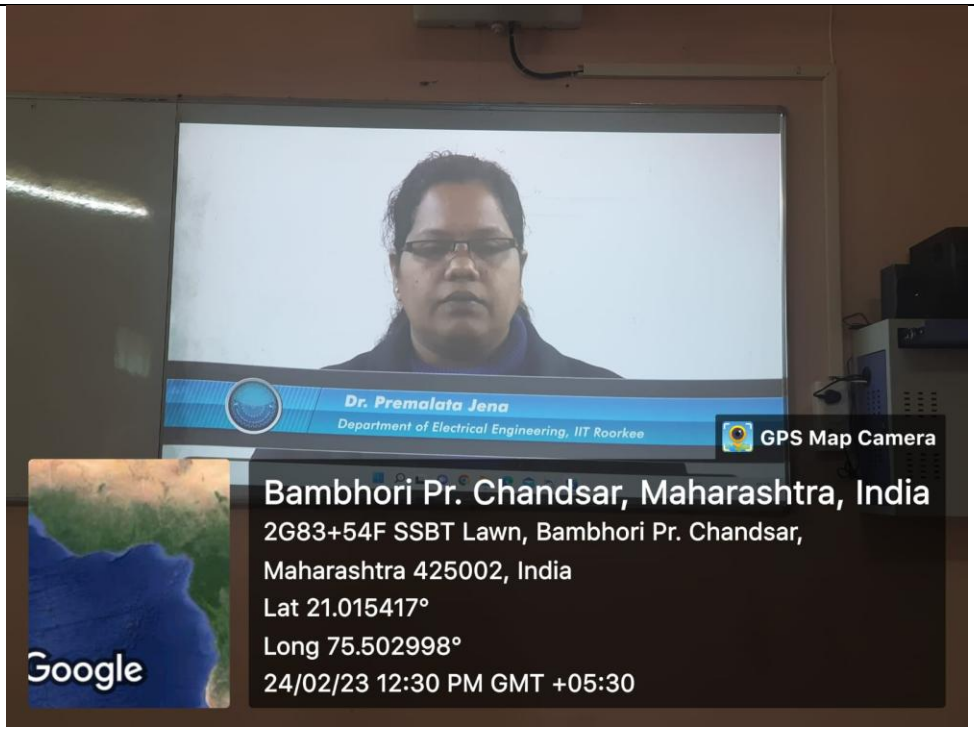
Dr. Premalata Jena
Department of Electrical Engineering, IIT Roorkee
GPS Map Camera
Bambhori Pr. Chandsar, Maharashtra, India
2G83+54F SSBT Lawn, Bambhori Pr. Chandsar,
Maharashtra 425002, India
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Long 75.502998°
24/02/23 12:30 PM GMT +05:30
Google


GPS Map Camera
Bambhori Pr. Chandsar, Maharashtra, India
N H 06 Bambhori, Bambhori Pr. Chandsar, Maharashtra
425002, India
Lat 21.013952°
Long 75.502362°
25/02/23 11:34 AM GMT +05:30
Google

	
Permission and Contents	Annexure A
Notice	Annexure B (Notice Brochure and Course Schedule)
Broacher	Annexure C
Schedule	Annexure D
Attendance Sheet	Annexure E
Certificate	Annexure F
Feedback	Annexure G

Mr. M. Mujtahid Ansari

Coordinator

Mr. Vijay S. Pawar

Head

Department of Electrical Engineering

SSBT's College of Engineering & Technology,
Bambhori, Post Box No. 9, Jalgaon - 425001 (MS)

WE GLOW THE WORLD

Est. of Dept: 1999

Est:1983
Web: http://www.sscoetjalgaon.ac.in
Email: sscoetjal@gmail.com

Email:deptdelect@gmail.com
Ph. No..:(0257) 2258391-95, Ext. No. : 331
Fax No.: (0257) 2258392

Ref: No.: COET/Electrical/22-23/

Date: 14 /02/2023

To,

The Principal

SSBT's College of Engineering and Technology,

Bambhori, Jalgaon .

Permitted.
14/02/2023

Subject: Permission to conduct Add-On Course on "Smart Grid".

Respected Sir,

Add-on courses are skill enhancing program that helps students for job, self-employment and empowerment. Hence, our department is interested to conduct Add-on Course on "**Smart Grid**" during 20th to 25th Feb.2023 This course will be conducted for 30 hours duration.

Hence I request you to permit us to conduct Add-on Course.

Thanking you

Yours faithfully

Head of Department

Electrical Engineering Department
SSBT's College of Engg. & Tech., Jalgaon

Enclose: Course Detail

Mission

To provide student-centered conducive environment for preparing knowledgeable, competent and value added electrical engineers.

Vision

To emerge as the leading Electrical Engineering department for inclusive development of students.

Department of Electrical Engineering

SSBT's College of Engineering & Technology,
Bambhori, Post Box No. 9, Jalgaon - 425001 (MS)

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Ph. No..:(0257) 2258391-95, Ext. No. : 331
Fax No.: (0257) 2258392

Ref: No.: COET/Electrical/22-23/

Date: 14 /02/2023

Add-On Course on "Smart Grid"

Objectives : To provide students with a working knowledge of fundamentals and development of Smart Electric Grid, from the basic concepts of power systems.

Course Description: This course mainly focuses on background and fundamental building blocks of smart grid with stringent emphasis on practical applications in the existing power system network. This course provides overview of smart grid and its potential in deferent type of power sectors s u c h as power generation, transmission a n d distribution i n Metro, Urban/Semi urban and remote locations of India. This also emphasizes on renewable energy source integration in present grids as well as in micro and nano grids as part of the course and explores its issues in operation, analysis, management, control, protection and monitoring.

Course Content: Introduction to Smart Grid l& ll, Architecture of Smart Grid System, Standards for Smart Grid System Elements and Technologies of Smart Grid System , Elements and Technologies of Smart Grid System-II Distributed Generation Resources-I, ll, lll & lV ,Wide Area Monitoring Systems-I & ll, Phasor Estimation-I & ll, Digital relays for Smart Grid Protection , Islanding Detection Techniques-I, ll, lll & lV, Smart Grid Protection-I.

Outcome:

After successful completion of this course the student will be able to:

1. Understand the fundamental element of the smart grid and power grid.
2. Understand different communication technologies used in smart grids.
3. Get accustomed with the fundamentals of SCADA and IED
4. Understand the Importance of Automation in Substation and substation Automation.
5. Understand the Energy management systems in era of smart grid.
6. Understand the distribution automation for smart grid development.

Coordinator Appointed : M. Mujtahid Ansari, Assistant Professor

Head of Department

Head
Electrical Engineering Departmer
College of Engg. & Tech., Jalg

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Fax No.: (0257) 2258392

Ref: No.: COET/Electrical/22-23/

Date: 14 /02/2023

Notice

All the students of TE and BE are informed that a Add-On Course on **" Smart Grid"** is scheduled from **20th to 25th Feb., 2023.** The course is mandatory to all and attendance will be observed in all sessions.

Head of Department

Head
Electrical Engineering Department
SSBT's College of Engg. & Tech., Jalgaon

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Shrama Sadhana Bombay Trust's

COLLEGE OF ENGINEERING AND TECHNOLOGY-

BAMBHORI, POST BOX NO. 94, JALGAON – 425001 (M.S.)

Included under section 2 (f) & 12 (B) of the UGC Act, 1956

Grade A (3.14) NAAC Accredited

Add On Course

On

Smart Grid

20th to 25th Feb 2023

ABOUT INSTITUTE

Shram Sadhana Bombay Trust runs the COLLEGE of ENGINEERING & TECHNOLOGY at Bambhori, Jalgaon, which is the one of the important industrial town & district headquarters of Maharashtra State. SSBT COET campus is lush green spread over 25 acres area and located on the bank of River Girna. The campus is well equipped with important amenities such as classrooms, drawing halls, laboratories, seminar halls, library, computer center, workshop, hostels, canteens, faculty quarters and indoor as well as outdoor sports facilities etc. The College was accredited by National Board of Accreditation, New Delhi for three times and presently NAAC accredited with A grade.

Under Graduate (UG) courses:

Civil Engineering
Chemical Engineering
Computer Engineering
Electrical Engineering
Electronics & Tele. Engineering
Mechanical Engineering

Ph.D. Programmes:

Bio-Technology
Civil Engineering
Chemical Engineering
Computer Engineering
Electrical Engineering
Electronics & Tele. Engineering
Mechanical Engineering

ABOUT ELECTRICAL DEPARTMENT

Department of Electrical Engineering is established in year 1999 with an intake of 60. The department was accredited for 5 years from 2008 to 2013 by N.B.A., New Delhi. The department has maintained the track of excellent results by securing I[st] Rank and Gold Medal at university level examination. The department has ten well equipped laboratories for UG and two labs for PG.

The department has signed MoU with National Infotech, Suart and kWatt Solution Pvt.. Ltd. IIT Bombay to enhance the quality based educational experience for students, researchers as well as faculties. Hands-on-training programs are organizes regularly. Department have recognized research laboratory under Kavayitri Bahinabai Chaudhari North Maharashtra University, Jalgaon, Maharashtra. Research scholars are working in the field of power quality, power electronics and renewable energy.

PRINCIPAL

Dr. G. K. Patnaik

CONVENERS

Mr. Vijay S. Pawar
Head, Electrical Engineering Department

ORGANISING COMMITTEE

Mr. M. Mujtahid Ansari Coordinator)
Mr. S. M. Shembekar
Ms. Abhilasha Salunkhe

COURSE DESCRIPTION

This course mainly focuses on background and fundamental building blocks of smart grid with stringent emphasis on practical applications in the existing power system network. This course provides overview of smart grid and its potential in deferent type of power sectors s u c h as power generation, transmission a n d distribution i n Metro, Urban/Semi urban and remote locations of India.

COURSE CONTENT

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COURSE OUTCOME

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Add On Course

On

"Smart Grid"

20th to 25th Feb 2023

WE GLOW THE WORLD

Organized By

Department of Electrical Engineering

Shrama Sadhana Bombay Trust's

COLLEGE OF ENGINEERING AND TECHNOLOGY

BAMBHORI, POST BOX NO. 94, JALGAON – 425001 (M.S.)

Office: 0257-2258391/93
Fax: 0257-2258392
Website: - www.sscoetjalgaon.ac.in

SSBT's College of Engineering and Technology, Jalgaon, Maharashtra

Department of Electrical Engineering

Add on Course on "Smart Grid" from 20th Feb to 25th Feb 2023.

Program Schedule

Date	20/02/2023	21/02/2023	22/02/2023	23/02/2023	24/02/2023
Session 1 11:00-12:00	**Inauguration (10:30-11:00)** Introduction to Smart Grid (Mr. M M Ansari)	Smart Grid Technology (Mr. V. S Pawar)	Challenges in Protection for Smart Grid (Mr. S. M Shembekar)	Application of Microprocessor and controller in Smart Grid (Ms. Abhilasha Salunkhe)	Future of Smart Grid (Mr. N S Mahajan, RCPIT)
Session 2 12:00-13:00	Introduction to Smart Grid-I (NPTEL, Prof. N.P. Padhy & Prof. Premalata Jena , IIT Roorkee)	Standards for smart grid system (NPTEL, Prof. N.P. Padhy & Prof. Premalata Jena , IIT Roorkee)	Distributed Generation Resources – I (NPTEL, Prof. N.P. Padhy & Prof. Premalata Jena , IIT Roorkee)	Wide Area Monitoring System – I (NPTEL, Prof. N.P. Padhy & Prof. Premalata Jena , IIT Roorkee)	Digital Relays for Smart Grid Protection (NPTEL, Prof. N.P. Padhy & Prof. Premalata Jena , IIT Roorkee)
13:00-13:45	**Break**	**Break**	**Break**	**Break**	**Break**
Session 3 13:45-14:45	Introduction to Smart Grid-II (NPTEL, Prof. N.P. Padhy & Prof. Premalata Jena , IIT Roorkee)	Elements and Technologies of smart grid system (NPTEL, Prof. N.P. Padhy & Prof. Premalata Jena , IIT Roorkee)	Distributed Generation Resources – II (NPTEL, Prof. N.P. Padhy & Prof. Premalata Jena , IIT Roorkee)	Wide Area Monitoring System – I (NPTEL, Prof. N.P. Padhy & Prof. Premalata Jena , IIT Roorkee)	Islanding Detection Techniques – I (NPTEL, Prof. N.P. Padhy & Prof. Premalata Jena , IIT Roorkee)
Session 4 14:45-15:45	Introduction to Smart Grid-II (NPTEL, Prof. N.P. Padhy & Prof. Premalata Jena , IIT Roorkee)	Elements and Technologies of smart grid system – II (NPTEL, Prof. N.P. Padhy & Prof. Premalata Jena , IIT Roorkee)	Distributed Generation Resources – II (NPTEL, Prof. N.P. Padhy & Prof. Premalata Jena , IIT Roorkee)	Wide Area Monitoring System – II (NPTEL, Prof. N.P. Padhy & Prof. Premalata Jena , IIT Roorkee)	Islanding Detection Techniques – I (NPTEL, Prof. N.P. Padhy & Prof. Premalata Jena , IIT Roorkee)
Session 5 15:45-17:45	Architecture of smart grid system (NPTEL, Prof. N.P. Padhy & Prof. Premalata Jena , IIT Roorkee)	Elements and Technologies of smart grid system – II (NPTEL, Prof. N.P. Padhy & Prof. Premalata Jena , IIT Roorkee)	Distributed Generation Resources – III (NPTEL, Prof. N.P. Padhy & Prof. Premalata Jena , IIT Roorkee)	Wide Area Monitoring System – II (NPTEL, Prof. N.P. Padhy & Prof. Premalata Jena , IIT Roorkee)	Quiz and Valedictory Function

Shram Sadhana Bombay Trust's

COLLEGE OF ENGINEERING AND TECHNOLOGY

Bambhori, Post Box No. 94, Jalgaon-425001 (M.S.)

Attendance

AY 2022-23 Term-II

Title of the Program: Add-On Course on "Smart Grid"

Duration : 20th to 25th Feb 2023 (30 Hours Duration)

List of Students' Enrolled:

Date: 22/02/2023

Sr. No.	Roll No	Class	Name of Students	Sign
1	14	TE	Kunal Lakhichand Jir	
2	29	TE	Siddhesh Hitendra Rane	
3	13	TE	Soham Narendra Jawale	
4	05	TE	Ninad Ashok Chaudhary	
5	12	TE	Pranav Rajendra Jadhav	
6	28	TE	Kiran Shashikant Rane	
7	27	TE	Sujay Dnyaneshwar patil	
8	26	TE	Shitesh Balu Patil	
9	36	TE	Supesh Gajanan Therokar	
~~10~~ 34	34	TE	Vivek Rupsing Sisode	
11	17	TE	Jayesh Maharu Magare	
12	42	BE	Sumit Sandip Patil	
13	23	BE	Tejas Nivrutti Mahajan	
14)	45	BE	Pawar Sambhaji Shivaji	
15)	50	BE	Wagh Jayesh	
16)	14	BE	Prajwal P. Deshpande	
17)	05	BE	Pratik Kiran Barge	
18)	08	BE	Harshal Anil Bhombe	
19)	40	BE	Samir chetan patil	
20)	15	BE	Nikhil Narendra Devare	
21)	37	TE	Falguni Vijay Wankhede	
22)	22	TE	Pooja jitendra Patil.	
23)	11	TE	Mangeshi Ravindra Jadhav	
24)	19	TE	Tanvi Sukdev mali	
25)	36	BE	Mayuri R. Patil	
26)	48	BE	Yuvika R. Sapkale	
27	18	TE	Poonam Raju Mahajan	
28	06	TE	Pournima Sudhakar dhangar	
29	37	BE	Nakul G. Patil	
30)	23	TE	Pramod S. Patil	
31)	22	BE	Bhubham Lakhichand Mahajan	
32)	47	BE	Deven Sharad Rane	
33)	20	TE	Devendra Sunil Patil	

22/02/2023

Coordinator

Head

Head
Electrical Engineering Department
SSBT's College of Engg. & Tech., Jalgaon

Shram Sadhana Bombay Trust's

COLLEGE OF ENGINEERING AND TECHNOLOGY

Bambhori, Post Box No. 94, Jalgaon-425001 (M.S.)

Attendance

AY 2022-23 Term-II

Title of the Program: Add-On Course on "Smart Grid"

Duration : 20th to 25th Feb 2023 (30 Hours Duration)

List of Students' Enrolled:

Date: 22/02/2023

Sr. No.	Roll No	Class	Name of Students	Sign
1)	41	BE	Shubham Namdev patil	
2)	31	BE	Abhishek Kailas patil	
3)	24	BE	Ananta Raju Mahale.	
4)	51	BE	Bhavesh Kishor Wanke	
5)	9	BE	Mayur Raju Birale	
6)	17	BE	Aniket Dagadu Jadhav	
7]	18	BE	Prashant Sadu Jadhav	
8]	46	BE	Vishal Darasing Pawara	
9]	30	BE	Pradip Sharad padki	
10]	13	BE	Ritek vijay Chavan	
11]	20	BE	Rahul. Ravindra koli	
12)	08	BE	Harshal Anil Bhambe	
13)	40	BE	Samir Chetan Patil	
14)	15	BE	Nikhil Narendra Devare	
15]	06	TE	Pournima Sudhakar Bhanyar	
16]	18	TE	Poonam Raju Mahajan	
17]	48	BE	Yutika Rajaram Sapkale	
18)	36	BE	Mayuri Rajendra Patil	
19)	19	TE	Tanvi sukdeo Mali	
20)	11	TE	Mangeshi Ravindra Jadhav	
21]	10	TE	Bhargi Rajendra Jadhav	
22]	34	BE	Divya Lala Patil	
23)	44	BE	Vaishnavi vilas Patil	
24)	06	BE	Aachal H Bhangale	
25)	02	TE	Ruchi Dinesh Bhatkar	
26)	15	TE	Jagruti Kailas Kasar.	
27)	03	BE	Tushar Vasudev Badgujar	
28)	07	BE	Bhushan chhotu Bhoi	
29)	12	BE	Bhavesh subhash chaudhari	
30)	24	TE	Rushikesh vijay Patil	
31)	21	TE	Nikhil Pravin Patil	
32)	04	BE	saurabh chandrakant Bagul.	
33)	09	TE	Girase Akshay Kalyansing	
34)	21	BE	Mayur Dattatray Mahajan	

Coordinator
22/02/2023

Head
Electrical Engineering Department

Head

SSBT's College of Engineering & Technology,

Bambhori, Jalgaon - 425001

Included under section 2(f) and 12(B) of the UGC Act, 1956

Grade A (3.14) NAAC Re-Accredited 2nd Cycle

WE GLOW THE WORLD

Add-On Course
on
"Smart Grid"

Certificate of Participation

This is to certify that Mr. / Ms. ***Sneha Jitendra Jadhav*** *of* ***Final Year*** *has successfully attended One Week (30 hours) Add-On Course on* ***"Smart Grid "*** *held during 20th to 25th Feb, 2023 organized by Department of Electrical Engineering, SSBT's College of Engineering & Technology, Bambhori, Jalgoan (MS), India.*

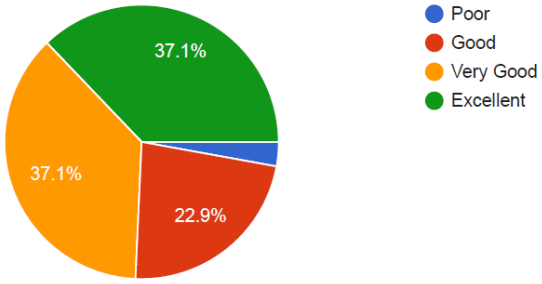
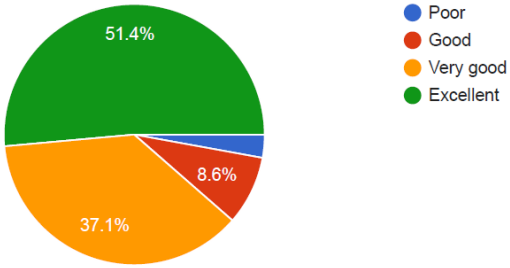
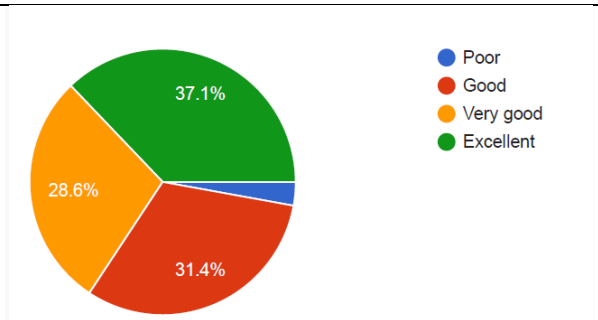
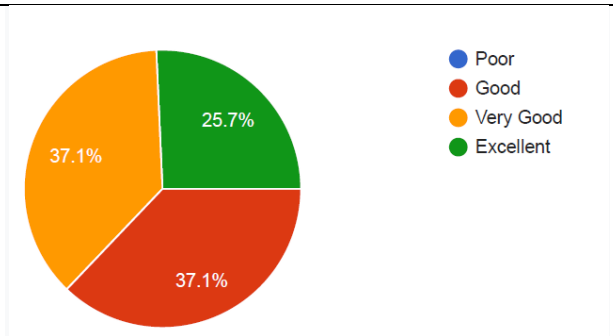
Mr. M. Mujtahid Ansari
Coordinator
Electrical Deptt., SSBT's COET, Jalgaon

Mr. V. S. Pawar
Convener
Electrical Deptt., SSBT's COET,

Prof. (Dr.) G. K. Patnaik
Principal, SSBT's COET, Jalgaon

Feedback Form for Add-On Course on "Smart Grid"

20th th to 25th Feb 2023 (30 Hours Duration)

Questions	Responses
The course as a whole was	
Course Organization was	
Explanations and enthusiasm of instructor were	
Amount you learned was	
Encouragement given to students to participate was: