



Department of Electrical & Electronics Engineering

One day workshop Report

on

"Electrical substation Design"

Organised by

**Department of Electrical and Electronics Engineering in Association with
IEEE- MITS –Student Chapter, 25-06-2021, 10.00AM to 12PM**

Submitted by: Dr M.Vaigundamoorthi, Professor., Dept. of EEE

Resource Person: SATHEESHKUMAR JEGADEESAN, (Senior Electrical Engineer)

Mott MacDonald & Company LLC, Oman

Attended: II/III/ IV B-Tech students, Faculties of our institution, participants from other institution (Total Number: 123)

Mode: Microsoft Team

The one-day workshop session was started at 10 AM. The Workshop was initiated by Dr. A. V. Pavan Kumar, HOD-EEE Department. The resource person **SATHEESHKUMAR JEGADEESAN**, was introduced by Dr.M. Vaigundamoorthi, Dept. of EEE. The industry expert addressed the gathering about Electrical Substation Design – Overview

1. At the beginning of the presentation, the resource person discussed about the introduction to substation, types of power system network, components , Types of substation based on voltage level and insulation level
2. The speaker has explained Overview of substation planning such as site selection, switching scheme, security of supply, extendibility ,maintainability ,operational flexibility etc
3. The resource person highlighted the need for electrical clearness ,types and methods to control, switching scheme etc .
4. The speaker suggested the engineering deliverables such as 1.Drawing – single line diagram, layout, protection, metering , earth layout, cable tray layout, lightning protection , lightning layout etc
5. The speaker had explained the interlocking philosophy, substation control such as level 0,1,2,3,. (control local to equipment, Bus bar control, station HMI, Load dispatch) and discussed about earthing grid design , earthing design procedure , EDSA output
6. **Feedback:** The students were moreover passionate to know about the design issues for Substation and software used such as ETAB, The session was concluded followed by a vote of thanks which was given by Dr M .Vaigundamoorthi, Professor –EEE.

Event Photos:



MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE (UGC-AUTONOMOUS)



Affiliated to JNTUA, Anantapuramu & Approved by AICTE, New Delhi
Recognised Research Center, Accredited by NBA for CE, CSE, ECE, EEE, ME, MBA &
MCA, Recognised by UGC under the sections 2(f) and 12(B) of the UGC act 1956

Department of Electrical & Electronics Engineering

One day workshop on “ Electrical Substation Design “
Organized by
Department of Electrical & Electronics Engg in Association with
IEEE-MITS Student Chapter



**MADANAPALLE INSTITUTE OF
TECHNOLOGY & SCIENCE**
(UGC - AUTONOMOUS INSTITUTION)
Madanapalle-517325, Chittoor Dist., Andhra Pradesh



DATE : 25/6/2021(Friday) TIME : 10AM TO 12PM

Resource Person



SATHEESHKUMAR JEGADEESAN
(Senior Electrical Engineer)
Mott MacDonald & Company LLC,
Oman

CHIEF PATRON

Dr. N.Vijaya Bhaskar Choudary ,Ph.D
Secretary & Correspondent

PATRON

Dr.C. YUVARAJ, Ph.D
Principal

Coordinators

Dr. A.V.Pavan Kumar ,Ph.D
Dr.M.Vaigundamoorthi,Ph.D

FOR REGISTRATION :

<https://forms.gle/sYEXR4kbULFr54hKA>

Phone numbers: 9100907321/9160020781

WEBSITE : WWW.MITS.AC.IN



GIS room Layout

The diagram illustrates the GIS room layout with various components labeled 1 through 11. The components are:

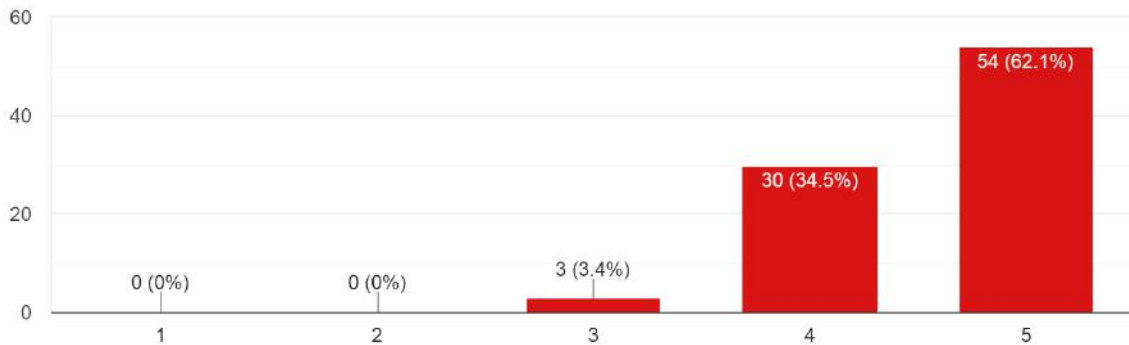
- Integrated local control inside
- Support for control outside
- Current transformer
- Busbar with disconnect and earthing switch
- Insulator side of the circuit-breaker
- Busbar with disconnect and earthing switch
- Slow-energy spring mechanism with small busbar control unit
- Voltage transformer
- High-speed earthing switch
- Outgoing feeder module with disconnect and earthing switch
- Cable-sealing end



Department of Electrical & Electronics Engineering

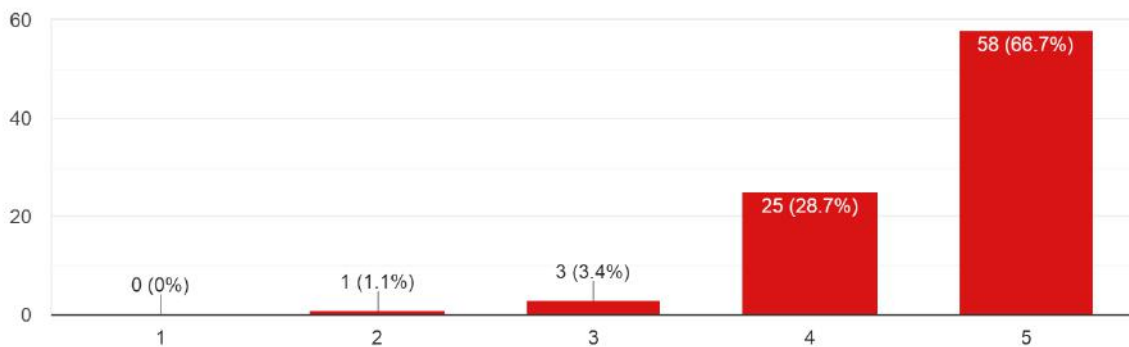
2. The interaction was useful and resource person explanation.

87 responses



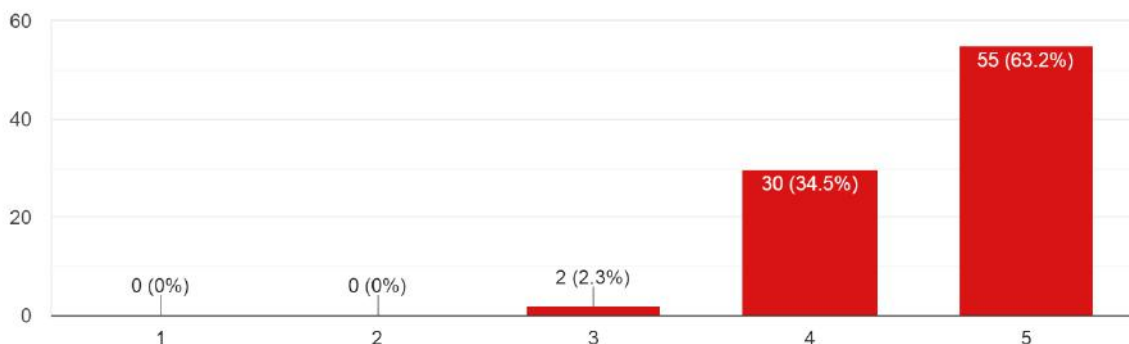
3. The information in the interaction was presented in a clear and organized manner.

87 responses



4. The presenter responded to questions an informative, appropriate and satisfactory manner.

87 responses

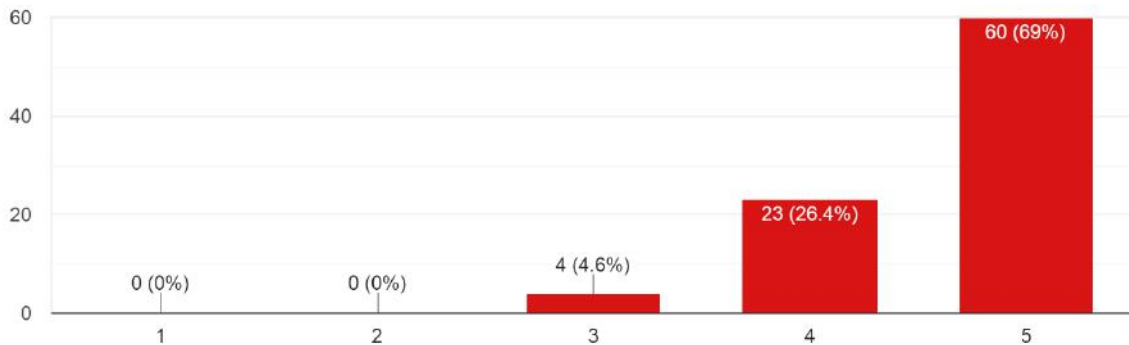




Department of Electrical & Electronics Engineering

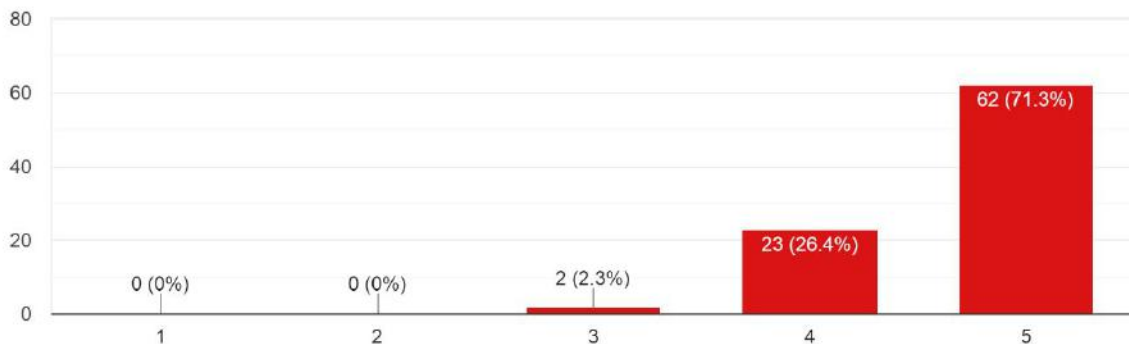
5. your impression of facilities provided by the institute for interaction.

87 responses



6. Overall, the session was informative and valuable.

87 responses



7. In what ways could this interaction have been improved to better suit your needs? 50 responses

Nothing
Good
No
Yes
it is good
Ya really very useful.because of this interaction season improve our knowledge and knowing about outside what happen after coming out what use evarything knowing.
Interacting with students directly in a Seminar
As today we seen about substation operations . So explanation with an animation is good to understand.As by theory and the practical both were different. So if you show an animation's like then we can easily see how the work and how was the theory states.
Ntg



MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE (UGC-AUTONOMOUS)

Affiliated to JNTUA, Anantapuramu & Approved by AICTE, New Delhi
Recognised Research Center, Accredited by NBA for CE, CSE, ECE, EEE, ME, MBA &
MCA, Recognised by UGC under the sections 2(f) and 12(B) of the UGC act 1956



Department of Electrical & Electronics Engineering

All good But in offline it is useful and understanding
knowing about the substation
All good
Yes it is improved our knowledge on the substation
By showing practical things
It's great and gainedknowledge
It's perfectly suits my needs.
More than enough
Now it is good
It's very useful and we came to know about substation, awarennessand jobs
We get knowledge on designing and how to improve our skills to get core job.
In sharing screen
Its nice
To improve more knowledge about working system of a sub-station
It's good
To know about the skills.
Session time need to increase for more depth of understanding
It was good
Overall Excellent
To listen more classes
To improve our knowledge
research work
Future useful concepts
No improvements it is so nice
To explain with experimental process or showing how it will work in real or explain with some video process.
It was so useful to my future
Enough
Basic concepts
Well known person about app which is used for the meeting.
Helping in improving the knowledge about substation and it's equipment.
As we don't know about the knowledge of iñdustries.so,firstly briefly explain the outer structure of industries and things whatever there.Then we will understand about them by the inner parts of them and their working etc..so, please explain the outer structure of substations first..then explain all the things since we are freshers.anyway good session sir.Thank you for your valuable session.
About the electrical substation design.



MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE (UGC-AUTONOMOUS)

Affiliated to JNTUA, Anantapuramu & Approved by AICTE, New Delhi
Recognised Research Center, Accredited by NBA for CE, CSE, ECE, EEE, ME, MBA &
MCA, Recognised by UGC under the sections 2(f) and 12(B) of the UGC act 1956



Department of Electrical & Electronics Engineering

with the vedios clops or clear photos of physical components which will give small practical expetience

8. Any Other Comments 39 responses

No
Nothing
Good
Good
Good useful session
Nothing
The webinar is good
Thank you for conducting workshop
It is very useful to the who go to the core side
Not required
no
It helps us to gain knowledge so keep on doing webinars sir
Useful topic
This program is so useful and informative
No comments
No comments
Session is nice sir.

List of Participants:

S NO	Full Name	User Action	Timestamp
1	HOD- EEE	Joined	6/25/2021, 11:33:06 AM
2	Mahendra Babu. T	Joined before	6/25/2021, 11:33:06 AM
3	satheeshkumar (Guest)	Joined before	6/25/2021, 11:33:06 AM
4	Mallesh Naik. S	Joined before	6/25/2021, 11:33:06 AM
5	Siva Nanda Kishore. G	Joined before	6/25/2021, 11:33:06 AM
6	Thejeswini. R	Joined before	6/25/2021, 11:33:06 AM
7	Yaswanth Kumar P	Joined before	6/25/2021, 11:33:06 AM
8	Mohammed Afzal. S	Joined before	6/25/2021, 11:33:06 AM
9	Dr Vaigundamoorthi M	Joined before	6/25/2021, 11:33:06 AM
10	Howdekar Eshaal Prem	Joined before	6/25/2021, 11:33:06 AM
11	Ramesh. U	Joined before	6/25/2021, 11:33:06 AM
12	shivasaigananesh	Joined before	6/25/2021, 11:33:06 AM
13	Upendra. K	Joined before	6/25/2021, 11:33:06 AM
14	Hemalatha. Nossam	Joined before	6/25/2021, 11:33:06 AM
15	Sreemanth Reddy. S	Joined before	6/25/2021, 11:33:06 AM



MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE (UGC-AUTONOMOUS)



Affiliated to JNTUA, Anantapuramu & Approved by AICTE, New Delhi
Recognised Research Center, Accredited by NBA for CE, CSE, ECE, EEE, ME, MBA &
MCA, Recognised by UGC under the sections 2(f) and 12(B) of the UGC act 1956

Department of Electrical & Electronics Engineering

16	Sumatha. K	Joined before	6/25/2021, 11:33:06 AM
17	Sumanth. S	Joined before	6/25/2021, 11:33:06 AM
18	Vishnu Vardhan. E	Joined before	6/25/2021, 11:33:06 AM
19	Bharadwaj. T L	Joined before	6/25/2021, 11:33:06 AM
20	Shaik Afzal Ali	Joined before	6/25/2021, 11:33:06 AM
21	Nanda Kishore. V	Joined before	6/25/2021, 11:33:06 AM
22	K.Mallikarjuna Reddy	Joined before	6/25/2021, 11:33:06 AM
23	Mounika. A	Joined before	6/25/2021, 11:33:06 AM
24	Venkata Chandra Kanth. V	Joined before	6/25/2021, 11:33:06 AM
25	Reddy Nagaraja. M	Joined before	6/25/2021, 11:33:06 AM
26	Hemanthi.p	Joined before	6/25/2021, 11:33:06 AM
27	Wafiqah Naaz. M	Joined before	6/25/2021, 11:33:06 AM
28	challa silpi priyanka	Joined before	6/25/2021, 11:33:06 AM
29	Siva Kiran Reddy. B	Joined before	6/25/2021, 11:33:06 AM
30	Sai Girish. N	Joined before	6/25/2021, 11:33:06 AM
31	B.Amaravathi	Joined before	6/25/2021, 11:33:06 AM
32	Praneeth Kumar. V	Joined before	6/25/2021, 11:33:06 AM
33	SHOBHA. R	Joined before	6/25/2021, 11:33:06 AM
34	Sai Pradeep. P	Joined before	6/25/2021, 11:33:06 AM
35	Vamsi. K	Joined before	6/25/2021, 11:33:06 AM
36	Bhargavi. K	Joined before	6/25/2021, 11:33:06 AM
37	Vijay Kumar. A	Joined before	6/25/2021, 11:33:06 AM
38	Dr. A. Muni Sankar (Guest)	Joined before	6/25/2021, 11:33:06 AM
39	Manideep. K	Joined before	6/25/2021, 11:33:06 AM
40	Syed Maaz	Joined before	6/25/2021, 11:33:06 AM
41	Sameer. S M D	Joined before	6/25/2021, 11:33:06 AM
42	Naveen. P	Joined before	6/25/2021, 11:33:06 AM
43	Sai Teja. N	Joined before	6/25/2021, 11:33:06 AM
44	Uday Kiran Reddy. B	Joined before	6/25/2021, 11:33:06 AM
45	Rukmini. K	Joined before	6/25/2021, 11:33:06 AM
46	Venkatesh. L	Joined before	6/25/2021, 11:33:06 AM
47	Rajakumar.B	Joined before	6/25/2021, 11:33:06 AM
48	Mounika. N	Joined before	6/25/2021, 11:33:06 AM
49	Himabindhu.R	Joined before	6/25/2021, 11:33:06 AM
50	Sai Praneeth. G	Joined before	6/25/2021, 11:33:06 AM
51	S.Girivardhan	Joined before	6/25/2021, 11:33:06 AM
52	Sharif. V	Joined before	6/25/2021, 11:33:06 AM
53	Leela Murali. S	Joined before	6/25/2021, 11:33:06 AM
54	Naveen Kumar. Katrimal	Joined before	6/25/2021, 11:33:06 AM
55	Devan Dilip. M	Joined before	6/25/2021, 11:33:06 AM
56	Indra Sena Reddy. V	Joined before	6/25/2021, 11:33:06 AM
57	Venkata Swaroop Kumar. C	Joined before	6/25/2021, 11:33:06 AM



MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE (UGC-AUTONOMOUS)



Affiliated to JNTUA, Anantapuramu & Approved by AICTE, New Delhi
Recognised Research Center, Accredited by NBA for CE, CSE, ECE, EEE, ME, MBA &
MCA, Recognised by UGC under the sections 2(f) and 12(B) of the UGC act 1956

Department of Electrical & Electronics Engineering

58	Prudhvi Kumar. K	Joined before	6/25/2021, 11:33:06 AM
59	Saritha. C	Joined before	6/25/2021, 11:33:06 AM
60	Bhargavi. T	Joined before	6/25/2021, 11:33:06 AM
61	Asha. K	Joined before	6/25/2021, 11:33:06 AM
62	Vani. B	Joined before	6/25/2021, 11:33:06 AM
63	Monalisa. M	Joined before	6/25/2021, 11:33:06 AM
64	Nirupamma. A	Joined before	6/25/2021, 11:33:06 AM
65	Nethaji. R	Joined before	6/25/2021, 11:33:06 AM
66	K.Siva Kumar	Joined before	6/25/2021, 11:33:06 AM
67	Dr Hira Singh Sachdev	Joined before	6/25/2021, 11:33:06 AM
68	Ganesh. D	Joined before	6/25/2021, 11:33:06 AM
69	Venkata Karthik.M	Joined before	6/25/2021, 11:33:06 AM
70	Vunnur Basha.D	Joined before	6/25/2021, 11:33:06 AM
71	Sowmya. N	Joined before	6/25/2021, 11:33:06 AM
72	Geetha. M	Joined before	6/25/2021, 11:33:06 AM
73	Sravan Kumar Reddy. N	Joined before	6/25/2021, 11:33:06 AM
74	Madhu. G	Joined before	6/25/2021, 11:33:06 AM
75	Vani. G	Joined before	6/25/2021, 11:33:06 AM
76	Vamsinath Reddy. Y	Joined before	6/25/2021, 11:33:06 AM
77	Vennela. L	Joined before	6/25/2021, 11:33:06 AM
78	Raviteja. Y	Joined before	6/25/2021, 11:33:06 AM
79	Vemareddy. B	Joined before	6/25/2021, 11:33:06 AM
80	Rajesh KS	Joined before	6/25/2021, 11:33:06 AM
81	Balaji. D	Joined before	6/25/2021, 11:33:06 AM
82	Amarnath. K	Joined before	6/25/2021, 11:33:06 AM
83	Shiva shankar Naik.D	Joined before	6/25/2021, 11:33:06 AM
84	Chandana. K	Joined before	6/25/2021, 11:33:06 AM
85	G.Thulasi	Joined before	6/25/2021, 11:33:06 AM
86	Fahiyakhanam. G	Joined before	6/25/2021, 11:33:06 AM
87	19691a02a6	Joined before	6/25/2021, 11:33:06 AM
88	Jaswanth. R	Joined before	6/25/2021, 11:33:06 AM
89	Surekha. D	Joined before	6/25/2021, 11:33:06 AM
90	Leelasundar. J S	Joined before	6/25/2021, 11:33:06 AM
91	Sai Mukhesh. Y	Joined before	6/25/2021, 11:33:06 AM
92	Shiva Prasad Reddy. M	Joined before	6/25/2021, 11:33:06 AM
93	Vandana. N	Joined before	6/25/2021, 11:33:06 AM
94	Kiran Kumar.y	Joined before	6/25/2021, 11:33:06 AM
95	P.Sathish Kumar	Joined before	6/25/2021, 11:33:06 AM
96	Sasikala Devi. R	Joined before	6/25/2021, 11:33:06 AM
97	Bharath Kumar. U	Joined before	6/25/2021, 11:33:06 AM
98	M.Srinivasulu	Joined before	6/25/2021, 11:33:06 AM
99	Vamshi. G	Joined before	6/25/2021, 11:33:06 AM



MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE (UGC-AUTONOMOUS)




Affiliated to JNTUA, Anantapuramu & Approved by AICTE, New Delhi
Recognised Research Center, Accredited by NBA for CE, CSE, ECE, EEE, ME, MBA &
MCA, Recognised by UGC under the sections 2(f) and 12(B) of the UGC act 1956

Department of Electrical & Electronics Engineering

100	Pavan Kalyan.G	Joined before	6/25/2021, 11:33:06 AM
101	Dinesh Reddy. D	Joined before	6/25/2021, 11:33:06 AM
102	Shakoor Baba. D	Joined before	6/25/2021, 11:33:06 AM
103	Ravindra Babu.JM	Joined before	6/25/2021, 11:33:06 AM
104	Sasidhar. C	Joined before	6/25/2021, 11:33:06 AM
105	Ganesh. M	Joined before	6/25/2021, 11:33:06 AM
106	Sai Sharmila. A	Joined before	6/25/2021, 11:33:06 AM
107	Mohammad Saqib Khan. P	Joined before	6/25/2021, 11:33:06 AM
108	Praneeth Guptha. K	Joined before	6/25/2021, 11:33:06 AM
109	Tulasi. B	Joined before	6/25/2021, 11:33:06 AM
110	Akash Naik. B	Joined before	6/25/2021, 11:33:06 AM
111	Sunitha. S	Joined before	6/25/2021, 11:33:06 AM
112	Sohail Basha. S	Joined before	6/25/2021, 11:33:06 AM
113	Suman. A	Joined before	6/25/2021, 11:33:06 AM
114	Maneesha. S	Joined before	6/25/2021, 11:33:06 AM
115	Siva Prasad Naidu. P	Joined before	6/25/2021, 11:33:06 AM
116	Madhusudhan.S	Joined before	6/25/2021, 11:33:06 AM
117	Yegma. G	Joined before	6/25/2021, 11:33:06 AM
118	Niha. S	Joined before	6/25/2021, 11:33:06 AM
119	Charan. R	Joined before	6/25/2021, 11:33:06 AM
120	Hemalatha. Nagichetty	Joined before	6/25/2021, 11:33:06 AM
121	Uday Kiran. P	Joined before	6/25/2021, 11:33:06 AM
122	Bala Chaithanya Krushna.P	Joined before	6/25/2021, 11:33:06 AM
123	Uday Sai. P J	Joined	6/25/2021, 11:33:18 AM


Dr. A. V. PAVAN KUMAR


(Dr. M.VAIGUNDAMOORTHY)