



## Report of Outreach Programme on 'Virtual Workshop on Laboratory Set-Up

**organized under the aegis of Vidya Vistar Project & DBT Star College Scheme  
by Shyam Lal College & Kalahandi University**

This is hereby reported that Shyam Lal College, University of Delhi and Kalahandi University, Odisha organized an Outreach Programme on '**Virtual Workshop on Laboratory Set-Up**' under the aegis of Vidya Vistar Project and DBT Star College Scheme on **07<sup>th</sup> December 2021** at 12:30 pm using Zoom as an online platform (**Annexure 1**). The Vidya Vistar Scheme is based on the principle of mutual respect, cooperation and sharing between two Colleges/Departments of both the universities as equal partners. The Vidya Vistar Project is being launched with the purpose of sharing a knowledge and offering a holistic academic approach to the young pupil by fostering innovative thinking and research aptitude through interaction with different universities from varied areas of science and technology. It is believed that such workshops of educators and students among the Kalahandi University and Shyam Lal College would enable them in harnessing their skills and creativity to accelerate the innovation at personal as well as organizational levels. With these objectives in mind, the present workshop was organized which is also the very first event organized under the above-said project. The event was well attended by over 100 participants, including **Prof. Sanjay Satpathy**, Vice Chancellor, Kalahandi University, **Prof. Rabi Narayan Kar**, Principal, Shyam Lal College, **Mr. Haladhar Sahu**, Nodal Officer, Kalahandi University, **Prof. Kusha Tiwari**, Coordinator Vidya Vistar & IQAC along with teachers and students of both the universities from varying backgrounds. Many of the students from Kalahandi University joined the session using a single id and got benefitted by listening to the speakers on a common projector screen. Various highlights of the event are mentioned below:

- After the opening remarks by **Dr. Ashu Gupta** (Convener, Coordinator DBT, Department of Chemistry, SLC) and **Prof. Kusha Tiwari** (Coordinator Vidya Vistar & IQAC), **Dr. Ajay Pratap Singh** (Assistant Professor, Department of Chemistry, SLC) shared a few glimpses of the various courses, activities and projects in which the faculties and the students of Chemistry Department are indulged in. He also gave a roadmap which the students can follow after the completion of their graduation courses.

- Afterwards, **Dr. Radhika Gupta** (Assistant Professor, Department of Chemistry, SLC) gave a virtual tour of the Chemistry Laboratory and the Sophisticated Analytical Instrumentation Laboratory where numerous instruments are kept many of which have been purchased using the DBT Grant provided under the Star College Scheme such as UV-Vis Spectrophotometer, Flame Atomic Emission Spectrophotometer, pH-cum-potentiometer, etc. She also explained the working and the possible experiments which the students are performing according to the reported BSc syllabi and also under the DBT Project.
- In a similar manner, **Dr. Monika Goyal** (Physics Coordinator, DBT) also gave a virtual tour of Physics Department including the various laboratories, staff room, lecture theatres, etc. She along with other staff members including **Dr. Pradeep** and **Dr. Sunny Aggarwal**, gave a brief explanation about the principle and working of various instruments.
- Finally, the vote of thanks was proposed by **Dr. Yukti Monga** (Assistant Professor, Department of Chemistry, Shyam Lal College).

An overwhelming response was recorded. The feedback forms reflected that a majority of the participants rated the workshop to be very informative and found the concepts to be presented excellently (**Annexure 2**). For this overwhelming success, the organizers are very thankful to **Prof. Rabi Narayan Kar** (Principal, SLC) for his support and guidance throughout the organization of this event. Glimpses of the event are attached herewith as **Annexure 3**.

## Annexure 1



**SLC** (University of Delhi)

**SHYAM LAL COLLEGE**

&

**KALAHANDI UNIVERSITY**

*under the aegis of VIDYA VISTAR Project  
& DBT Star College Scheme*

*organise*

**OUTREACH PROGRAMME**

*on*

**Virtual Workshop on Laboratory Set-Up**

**07<sup>th</sup> Dec  
2021  
12:30 PM**

**Organizing platform**



### PATRON

**Prof. Rabi Narayan Kar**  
Principal, Shyam Lal College

**Prof. Sanjay Satpathy**  
Vice Chancellor, Kalahandi University

### ORGANIZING MEMBERS

**Dr. Ashu Gupta**  
Convener, Coordinator DBT,  
Department of Chemistry, SLC

**Prof. Kusha Tiwari**  
Coordinator  
Vidya Vistar & IQAC, SLC

**Dr. Monika Goyal**  
Physics Coordinator  
DBT, SLC

**Mr. Haladhar Sahu**  
Nodal Officer  
Kalahandi University

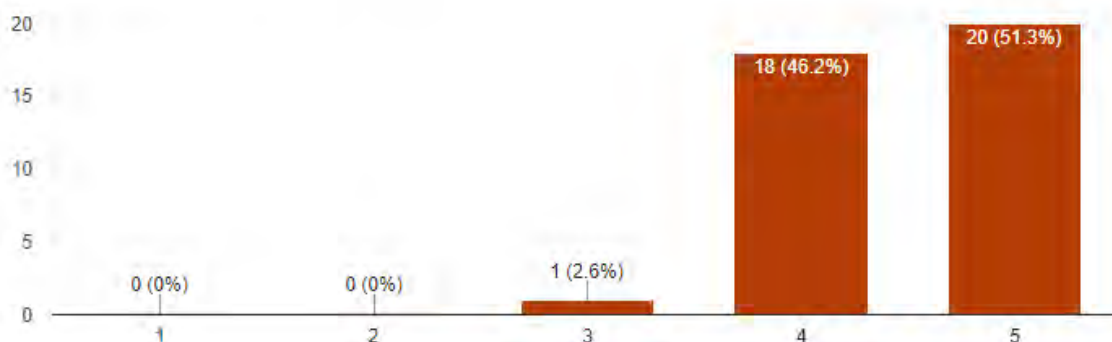
**Dr. Ajay Pratap Singh, Dr. Yukti Monga, Dr. Radhika Gupta**  
Faculty Members, Department of Chemistry, SLC

**Dr. Sunny Aggarwal, Dr. Pradeep**  
Faculty Members, Department of Physics, SLC

## Annexure 2

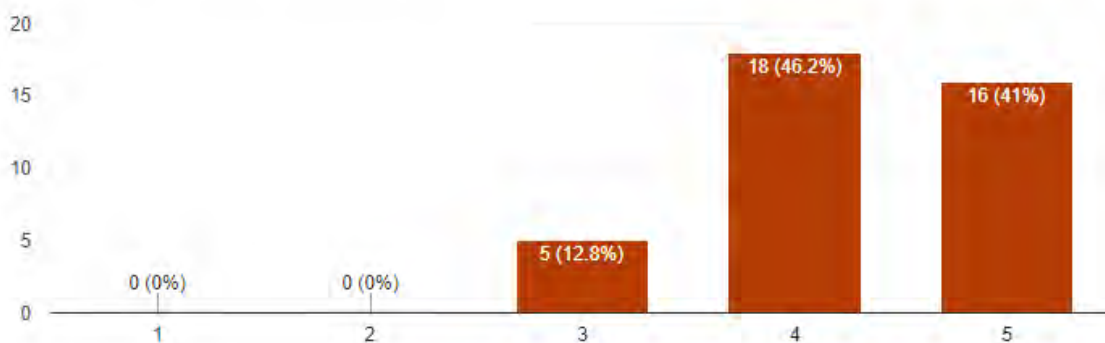
How informative did you find the workshop?

39 responses



How clear were the concepts we presented?

39 responses



Any other comment

21 responses

Excellent

Overallly it was good

very nice

We like to see zoology lab setup

It's a nice presentation and Nice collaboration of both the Kalahandi university and SLC which will definitely beneficial for both students and teachers ...Thanks alot 🙏😊

A very good initiative.... kindly arrange for Biological science also

This meeting is really very good and informative.

The session was really informative and motivating I wish to visit these labs and perform experiment in near future ...

It is an informative session.

This session was more informative and motivating, and I would like to visit the lab and perform experiments....

We would like to see the zoology lab set up

This has been very informative. Wish to see the Biological Lab settings in the near future.

We would like to see the zoology lab setup

Thanks for enlightening us and we are highly interested to see the biological lab set up in the future

no

We would like to see the zoology lab setup.

I liked it very much, it impressed me

The session was so informative. I gained much more knowledge from this. Thank you for organizing such a meeting.

This was a nice initiative and informative session. We wish to see biological sciences lab setup in the near future.



## Annexure 3

**Zoom Meeting** | You are viewing Shyam Lal College's screen | View Options

**Recording Paused**

**Participants (56)**

Waiting Room (2) | Message | Admit all

- Anshya Kashyap
- Ompriya yedav

Joined (56)

- RG Radhika Gupta (Co-host, me)
- SL Shyam Lal College (Host)
- DA Dr. ashu Gupta (Co-host)
- DN Dr. Rabi Narayan Kar (Co-host)
- HS Haladhara Sahu (Co-host)
- IK kushatwani (Co-host)
- RG realme 6 (Co-host)
- AP Ajay Pratap Singh-Chem (Co-host)
- YM yukti monga (Co-host)
- S Jaina1975

**Presented Slide:**

**SLC** (University of Delhi) **SHYAM LAL COLLEGE** & **KALAHANDI UNIVERSITY**  
 under the aegis of **INDIA VISTAR Project** & **03<sup>rd</sup> Star College Scheme**  
 organise  
**OUTREACH PROGRAMME**  
**Virtual Workshop on Laboratory Set-Up**  
 07<sup>th</sup> Dec 2021 | Organising at return | 12:30 PM | 2020

**PATRON:** Prof. Jyoti Chhabra, Vice-Chancellor, Kalahandi University

**ORGANIZING MEMBERS:**

- Dr. Ashu Gupta, In-charge Coordinator (IIS), Department of Chemistry, SLC
- Prof. Rabi Narayan Kar, Coordinator, VISTAR & IISAC, SLC
- Dr. Anurita Ghosh, Project Coordinator, SLC, SLC
- Mr. Harshwar Sahu, Head Office, Kalahandi University
- Dr. Smita Aggarwal, Dr. Anshu Chandra, Dr. Kailash Chandra, Health Officer, Department of Chemistry, SLC
- Dr. Sanjay Kumar, Head of Institute, Department of Chemistry, SLC

Zoom Meeting Controls: Mute, Stop Video, Security, Participants (56), Chat, Share Screen, Resume/Stop Recording, Reactions, Leave

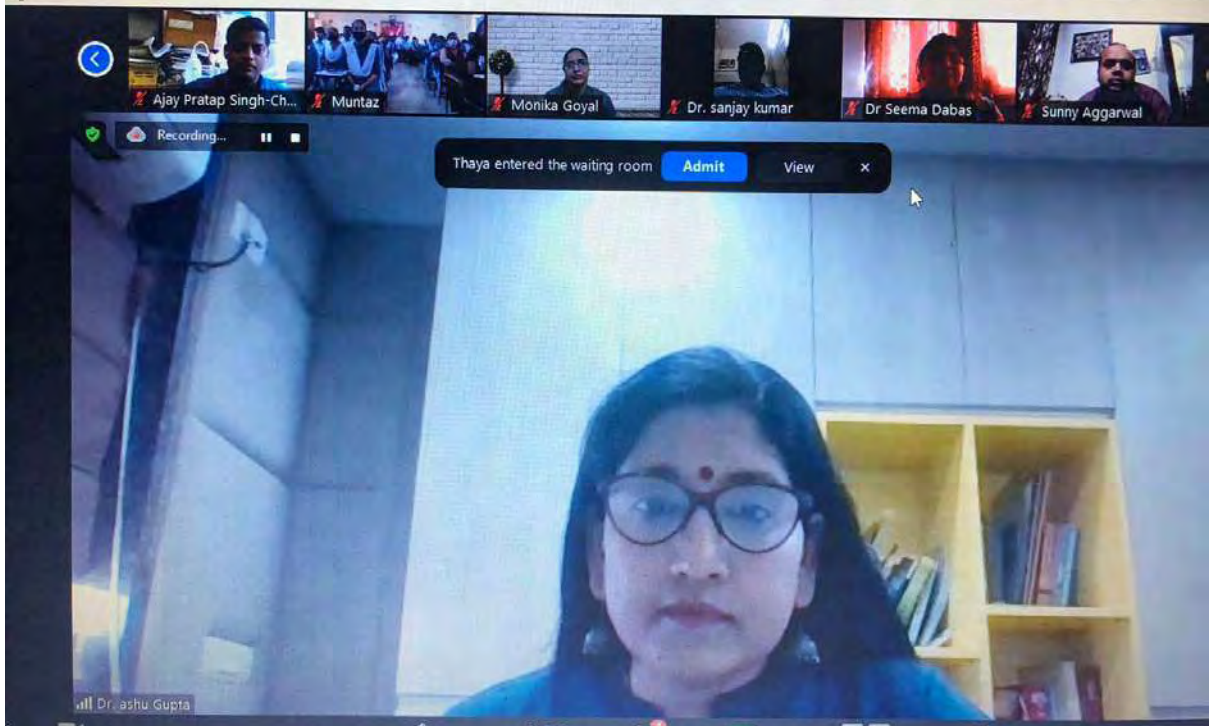
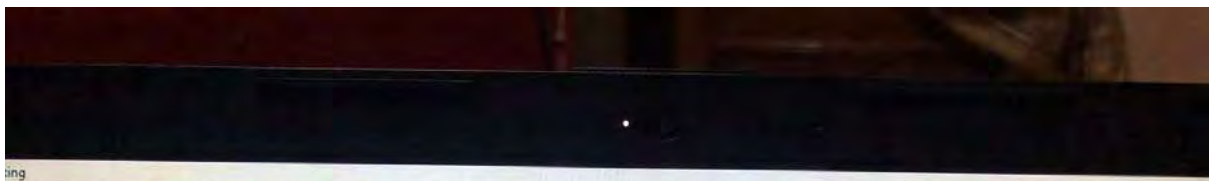
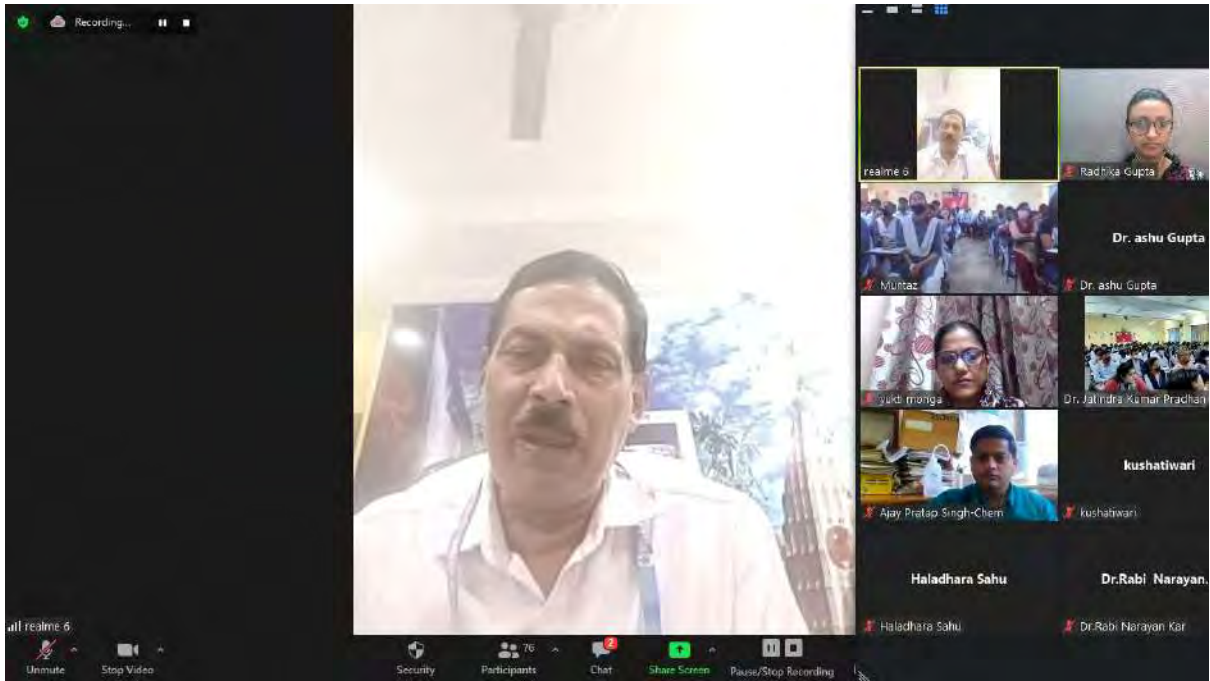
Windows Taskbar: Type here to search, 21°C, 12:32, 07-12-2021

**Recording...** | 3 people entered the waiting room | View

Grid of Participants:

- Haladhara Sahu
- Radhika Gupta
- Dr. ashu gupta
- Dr. Rabi Narayan Kar
- realme 6
- Muntaz
- kushatwani
- Shyam Lal College
- Ajay Pratap Singh-Chem
- Monika Goyal
- Sunny Aggarwal
- yukti monga
- Dr. Jatinendra Kumar Prajapati
- Galaxy J4
- Galaxy J2
- Deepak Kumar Sa
- Dambarudhar P...
- Dr. Komilla Suri
- Subhasini saho
- Akash
- Bijay Naik
- Reshu
- Dr. Ghanashyam...
- Sarat Kumar Naik
- Dr. Seema Dabas
- Deepak Kumar Sa
- Dambarudhar Patel
- Dr. Komilla Suri
- Subhasini saho
- Akash
- Bijay Naik
- Reshu
- Dr. Ghanashyam Behera
- Sarat Kumar Naik
- Dr. Seema Dabas

Zoom Meeting Controls: Mute, Stop Video, Security, Participants (74), Chat, Share Screen, Pause/Stop Recording, Reactions, Leave





Zoom Meeting

Recording...

Mute Stop Video Security Participants Chat Share Screen Pause/Stop Recording Reactions Leave

Type here to search

21°C 1257 07-12-2021

Recording...

### Chemistry Department Lab Facilities and Research Oriented Activity

- Double Beam UV-vis Spectrophotometer
- Flame Photometer
- pH Meter
- Colorimeter
- Microwave
- Potentiometer

Research Oriented DBT Project is running

Haladhara Sahu  
Radhika Gupta  
Dr. eshu Gupta  
realme 6  
Kushatiwari  
Ajay Pratap Singh-Chem  
yubi, morgan  
Muntaq  
Geleky JA  
rr4r4rtttf  
Sarat Kumar Naik  
Bijay Naik  
Deepak Kumar Sa  
Thaya  
Monika Goyal  
Dr. Jatindra Ku...  
Manas  
Akankshya



Recording...

### B.Sc. Chemistry lab work

<b>Haladhara Sahu</b> Haladhara Sahu	<b>Radhika Gupta</b> Radhika Gupta	<b>Dr. ashu Gupta</b> Dr. ashu Gupta
<b>realme 6</b> realme 6	<b>kushatiwari</b> kushatiwari	<b>Ajay Pratap Singh-Chem</b> Ajay Pratap Singh-Chem
<b>yukti monga</b> yukti monga	<b>Muniraz</b> Muniraz	<b>m44rttt</b> m44rttt
<b>Sarat Kumar Naik</b> Galaxy J4 Sarat Kumar Naik	<b>Bijay Naik</b> Bijay Naik	
<b>Deepak Kumar Sa</b> Deepak Kumar Sa	<b>Thaya</b> Thaya	<b>Monika Goyal</b> Monika Goyal
<b>Dr. Jatindra Ku...</b> Dr. Jatindra Kumar Pr...	<b>Manas</b> Manas	<b>Akankshya</b> Akankshya

You are viewing Ajay Pratap Singh-Chem's screen

## Major Government Opportunities

<b>Haladhara Sahu</b> Haladhara Sahu	<b>yukti monga</b> yukti monga
<b>kushatiwari</b> kushatiwari	<b>Ajay Pratap Singh-Chem</b> Ajay Pratap Singh-Chem
<b>Dr. ashu Gupta</b> Dr. ashu Gupta	<b>Radhika Gupta</b> Radhika Gupta

Stop Video Security Participants Chat Share Screen Pause/Stop Recording Reactions Leave

Recording...

Video Player: Video Playback Audio Video Settings Tools View Help

Dr. ashu Gupta Radhika Gupta realme 6

Dr. ashu Gupta Radhika Gupta realme 6

kushatiwari Ajay Pratap Sin... yukti monga

kushatiwari Ajay Pratap Singh-Ch...

Galaxy M Muntaz Sarat Kumar Naik

Bijay Naik Deepak Kumar Sa Thaya

Bijay Naik Deepak Kumar Sa Thaya

Monika Goyal Dr. Jatindra Ku... Sunny Aggarwal

Monika Goyal Dr. Jatindra Kumar Pr... Sunny Aggarwal

Biswa Ranjan N... Panchanan Raju

Biswa Ranjan Naik Panchanan Raju

Recording...

Video Player: Instrument video.m04 - VLC media player

### UV-VIS Spectrophotometer Experiments

Based on B.Sc. Syllabus, University of Delhi

1. Verify Lambert-Beer's law and determine the concentration of  $\text{CuSO}_4/\text{KMnO}_4/\text{K}_2\text{Cr}_2\text{O}_7$  in a solution of unknown concentration.
2. Study the kinetics of iodination of propanone in acidic medium.
3. Determine the amount of iron present in a sample using 1, 10-phenanthroline
4. Determine the dissociation constant of an indicator (phenolphthalein).
5. Study the pH-dependence of the UV-Vis spectrum (200-500 nm) of  $\text{K}_2\text{Cr}_2\text{O}_7$ .
6. Preparation and characterization of nanoparticles of gold using tea leaves/silver nanoparticles using plant extracts.
7. Synthesis of metal sulphide nanoparticles (MnS, CdS, ZnS, CuS) and characterization
8. Surface Plasmon study of metal nanoparticles by UV-Visible spectrophotometer.
9. Spectrophotometric identification and determination of caffeine and benzoic acid in soft drink.
10. Spectrophotometric determination of Iron in vitamin / dietary tablets.

**DBT Project**

1. To synthesize magnetic nanoparticles using potato extract and their use in degradation of Rhodamine B dye

Dr. ashu Gupta Radhika Gupta

Dr. ashu Gupta Radhika Gupta

realme 6 kushatiwari

realme 5 kushatiwari

Ajay Pratap Sin... yukti monga

Ajay Pratap Singh-Ch... yukti monga

Muntaz Suchit

Muntaz Suchit

Sarat Kumar Naik Bijay Naik

Sarat Kumar Naik Bijay Naik

Deepak Kumar Sa Monika Goyal


Deepak Kumar Sa Monika Goyal



Recording...

5 people entered the waiting room View X

instrument video mp4 - VLC media player



Dr. ashu Gupta Radhika Gupta

realme 6 kushatiwari

Ajay Pratap Sin... yukti monga


Muntaz Suchit

Sarat Kumar Naik Bijay Naik

Deepak Kumar Sa Monika Goyal

Recording...

instrument video mp4 - VLC media player



Dr. ashu Gupta Radhika Gupta

realme 6 kushatiwari

Ajay Pratap Sin... yukti monga

Muntaz Suchit

Sarat Kumar Naik Bijay Naik

Deepak Kumar Sa Monika Goyal

Recording...

5 people entered the waiting room View X

**Flame Photometer Experiments**  
**Based on B.Sc. Syllabus, University of Delhi**

1. Preparation of zeolite and removal of Mg and Ca ions from water samples quantitatively using zeolite
2. Detection of constituents of CAN (Calcium, Ammonium and Nitrate ions) fertilizer and estimation of Calcium content
3. Determination of Calcium, Iron, and Copper in food
4. Detection of heavy metal pollutants in illegal dumping
5. Estimation of macro-nutrients: Potassium, Calcium and Magnesium in soil samples

**DBT Project**

1. Estimation of Sodium and Potassium ion in Yamuna and Ganga river water samples

<b>Dr. ashu Gupta</b>	<b>Radhika Gupta</b>
realme 6	kushatiwari
Ajay Pratap Sin...	yukti monga
Muntaz	Suchit
Sarat Kumar Naik	Bijay Naik
Deepak Kumar Sa	Monika Goyal

Recording...

**PHYSICS DEPARTMENT SLC**

- The Department of Physics was established in 1966 in SLC.
- The Department has well equipped Classrooms, Physics Laboratory and Electronics Laboratory along with Research Labs.
- The Department offers the course B.Sc. Physical Science with Chemistry, Electronics and Computer Science specializations.

<b>Dr. ashu Gupta</b>	<b>Radhika Gupta</b>
realme 6	kushatiwari
Ajay Pratap Singh-Chem	yukti monga
Muntaz	Shyam Lal College
Monika Goyal	Shyam Lal College
Suchit	Abhisek Bishi
Suchit	Abhisek Bishi
Suchit	Sarat Kumar Naik
Suchit	Sarat Kumar Naik



Recording... You are viewing Monika Goyal's screen View Options

# Virtual Tour of Physics Department, SLC

Dr. ashu Gupta  
Radhika Gupta  
Monika Goyal  
Ajay Pratap Singh-Ch...  
yukti menga...  
kushatiwari  
Muntaz  
Suchit  
Sarat Kumar Naik  
Bijay Naik  
Deepak Kumar Sa  
Sunny Aggarwal


Unmute Stop Video Security Participants Chat Share Screen Pause/Stop Recording Reactions Leave

Recording...

Dr. ashu Gupta  
Radhika Gupta  
Monika Goyal  
Ajay Pratap Singh-Ch...  
yukti menga...  
kushatiwari  
Muntaz  
Suchit  
Sarat Kumar Naik  
Bijay Naik  
Deepak Kumar Sa  
Sunny Aggarwal

Recording... You are viewing Monika Goyal's screen View Options

Galaxy J4 entered the waiting room Admit View X




Participants:

- Dr. ashu Gupta
- Radhika Gupta
- Monika Goyal**
- Monika Goyal
- Ajay Pratap Singh-Ch...
- kushatiwari
- kushatiwari
- yukti menga
- Muntaz
- Suchit
- Muntaz
- Suchit
- Sarat Kumar Naik
- Deepak Kumar Sa
- Sarat Kumar Naik
- Deepak Kumar Sa
- Sunny Aggarwal
- Panchanan
- Sunny Aggarwal
- Panchanan

Unmute Stop Video Security Participants Chat Share Screen Pause/Stop Recording Reactions Leave


Recording... Chandan Behera entered the waiting room Admit View X



Participants:

- Dr. ashu Gupta
- Radhika Gupta
- Monika Goyal**
- Monika Goyal
- Ajay Pratap Singh-Ch...
- kushatiwari
- kushatiwari
- yukti menga
- Muntaz
- Suchit
- Muntaz
- Suchit
- Sarat Kumar Naik
- Deepak Kumar Sa
- Sarat Kumar Naik
- Deepak Kumar Sa
- Sunny Aggarwal
- Panchanan
- Sunny Aggarwal
- Panchanan

Recording...



Dr. ashu Gupta  
Dr. ashu Gupta

Radhika Gupta  
Radhika Gupta

Monika Goyal  
Monika Goyal

Ajay Pratap Singh Ch...  
Ajay Pratap Singh Ch...

kushatiwari  
kushatiwari

Muntaz  
Muntaz

Suchit  
Suchit

Sarat Kumar Naik  
Sarat Kumar Naik

Deepak Kumar Sa  
Deepak Kumar Sa

Sunny Aggarwal  
Sunny Aggarwal

Panchanan  
Panchanan