

DEPARTMENT OF MATHEMATICS

About the Department

The Department of Mathematics aims at providing in-depth knowledge of the subject which enables students to pursue their career in diverse range of fields like banking, civil services, corporate sector, actuarial sciences, teaching, research and many more. For the overall development of students, varied range of activities are organized which includes talks, seminars, workshops, quizzes, field visits, excursions and fun events.

Teacher In-Charge: Dr. Sharda Sharma Gautam

Association In-Charges: Dr. Amarjeet Singh, Dr. Mukta Garg

Tenure: 2021-2023

Activities 2021-2022

Departmental Elections for the Post of General Secretary

RADIAN-CE, The Mathematics Society conducted its annual Departmental Election for the academic year 2021-2022 to elect General Secretary from the 1st year students on 10th December, 2021. The entire department set out to vote digitally via Google forms on 10th December, 2021. The total number of votes casted by the students between 8:30 am – 11:45 am were 142. The results were declared via Google meet, an online platform at 3:00 pm on 11th December, 2021. Everything turned out to be so smooth, without any discrepancies and results were displayed with proper statistics as:

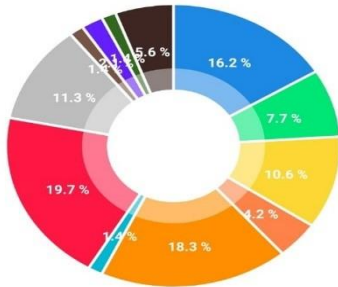
Rakhee Attri– General Secretary

Picture 1: Statistical view of results

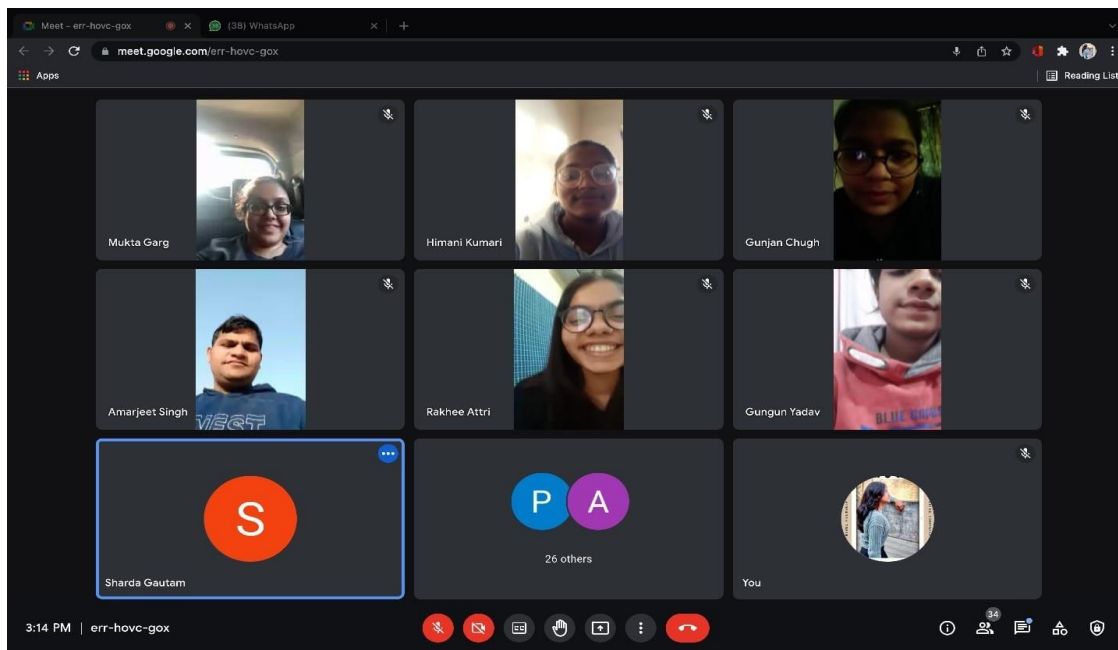
1. GENERAL SECRETARY

PIE CHART

- 94 Ishty Sethi - 1A - 23
- 483 Rakhi Kumari - 1B - 11
- 587 Gunjan Chugh - 1B - 15
- 1264 Sneha Tyagi - 1A - 6
- 1291 Gungun Yadav - 1A - 26
- 1485 Aarti kumari jadaun - 1A - 2
- 1537 Rakhee Attri - 1A - 28
- 1543 Amisha Jain - 1B - 16
- 1613 Aastha Shersia - 1A - 2
- 1618 Tanu Verma - 1A - 3
- 1629 Priyanshi Ashiwal - 1A - 2
- 1798 Yashika - 1B - 8



Picture 2: Results declared via Google Meet



“OBE Guidance Session”

The Department of Mathematics, Janki Devi Memorial College, University of Delhi successfully organized an introductory session of OBE (Open Book Examination) for all second and third year students of B.Sc. (Hons.) Mathematics on 27th November, 2021 at 4:00 p.m. It was held virtually via Zoom app, an online platform.

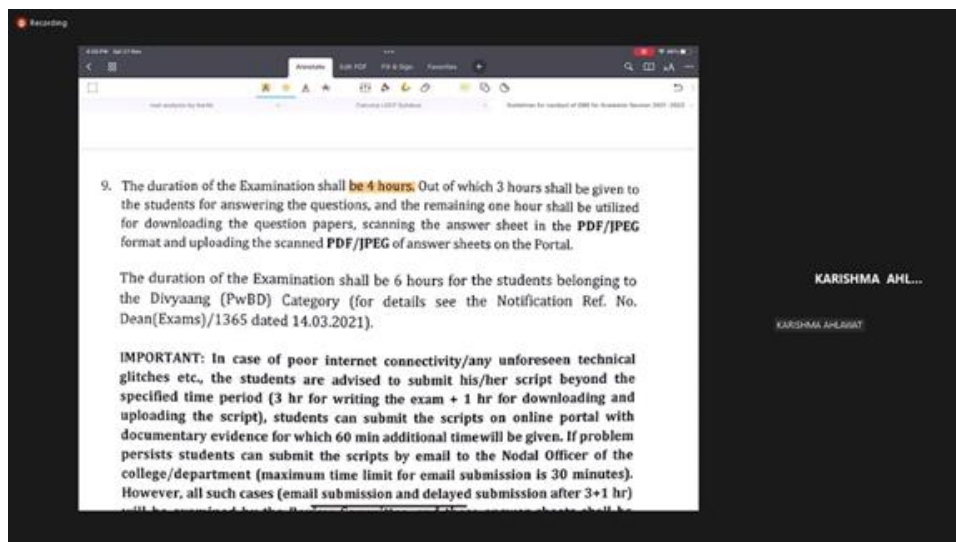
The objective of this session was to make students understand the process of downloading the question paper from the portal, submitting the answer scripts and to understand the rules and regulations regarding the online examinations according to the guidelines of the University of Delhi, so that the exams can be conducted smoothly.

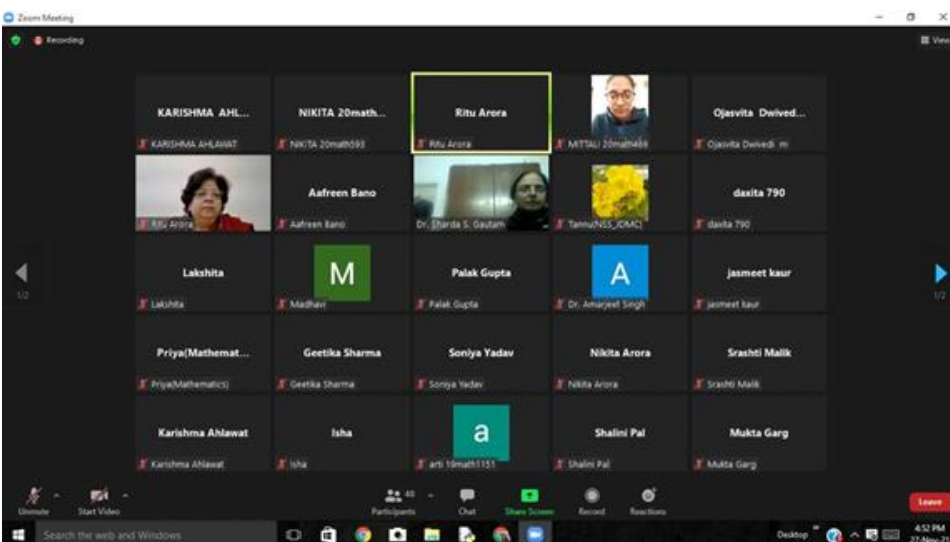
The session started with a welcome speech by Ms. Nancy, Class Representative, B.Sc.(H) Mathematics 2nd year. The session was further carried forward by Mrs. Karishma Ahlawat, faculty, Department of Mathematics who explained all the rules and regulations regarding the Open Book Examinations in detail. Furthermore, she explained the process of downloading the question paper from the portal and also the method of submitting the answer scripts. Students were also made aware of the situation if their answer script is not getting uploaded on the portal, in case of any technical glitch, it could be sent to the University directly through an e-mail.

The session turned out to be very informative. All the participants asked their queries which were well answered by Dr. Sharda Sharma Gautam, Teacher In-Charge, Dr. Ritu Arora, Senior Faculty, Mrs. Karishma Ahlawat, Faculty and other faculty members of the Department of Mathematics.

The session ended with a vote of thanks proposed by Ms. Nikita Sangwan, Vice President, Students' Union of Mathematics Association (2021-2022) and some motivational words by the faculty members of the department, which encouraged the students to appear for their examinations in a fair manner.

Pictures of the OBE Guidance Session-





“Orientation Program”

The Department of Mathematics, Janki Devi Memorial College, University of Delhi organized its “Orientation Program” for B.Sc.(H) Mathematics, first year students (batch 2021-24) on 22nd November 2021 at 10:00 a.m. It was held virtually via Zoom app, an online platform.

The objective of this session was to make freshers of Department of Mathematics familiar with the department and the college.

Newly admitted students were cordially welcomed by Ms. Nikita Sangwan, Vice-President, Students’ Union of Mathematics Association (2021-22) and Dr. Sharda Sharma Gautam, Teacher In-charge, Department of Mathematics.

Afterwards Dr. Tanu Gupta, faculty of Department of Mathematics made students’ familiar with the other faculty members of the department. She also discussed the curriculum to be followed in the first year, different societies of the college, Students’ Union members of the Department of Mathematics for the

session 2021-22. Moreover, she gave some important information regarding online platform and e-mail ids to the students.

Furthermore, Students' Union of the Department of Mathematics elaborated about the open posts regarding Class Representative, Discipline In-Charge and General Secretary for the Students' Union, Department of Mathematics to be selected from the first year batch.

Students were set free to ask their queries regarding their subject, college, societies and hostel. All the participants (students as well their parents) eagerly asked their queries about the college at the end of the session. Then their queries were successfully taken care by Dr. Sharda Sharma Gautam, Teacher In-charge, Department of Mathematics, Dr. Ritu Arora, senior faculty, Department of Mathematics and other faculty members of the department.

The session turned out to be very interactive. It was well attended by 120+ participants. The session ended with a vote of thanks proposed by Ms. Navya, President, Students' Union of Mathematics Association (2021-22).

Poster of Orientation Program-

JANKI DEVI MEMORIAL COLLEGE
UNIVERSITY OF DELHI
DEPARTMENT OF MATHEMATICS

Cordially invites you to
ORIENTATION PROGRAM
BATCH OF 2021-24

**NOV. 22, 2021
10:00 AM
ONWARDS**

Link for the meeting:
[https://us06web.zoom.us/j/82848461739?](https://us06web.zoom.us/j/82848461739?pwd=OWZZbkNpVURobUxYZFBWRmhldEJlQT09)
[pwd=OWZZbkNpVURobUxYZFBWRmhldEJlQT09](https://us06web.zoom.us/j/82848461739?pwd=OWZZbkNpVURobUxYZFBWRmhldEJlQT09)

visit <http://jdm.du.ac.in/> to know more about JDMC
visit <http://jdm.du.ac.in/mathematics.html> to know more about Maths Dept.

Pictures of Orientation Program-

The screenshot shows a Zoom meeting window. The main content is a presentation slide with a blue brushstroke background. The slide title is "PAPERS IN SEMESTER 1". Below the title, there are two sections:

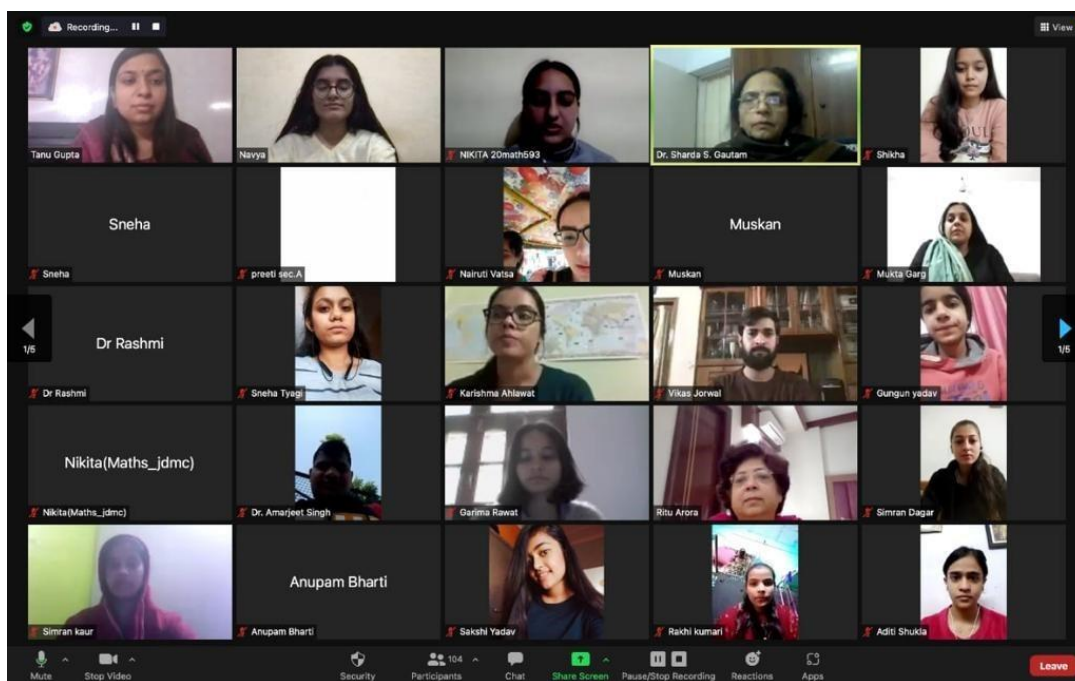
- Ability Enhancement Compulsory Course (AECC)**
 - To be chosen from:
 - English or Hindi.
- Generic Elective 1 (GE 1)**
 - To be chosen from:
 - Commerce, Economics, English, Hindi, History, Philosophy, Political Science, Sanskrit and Sociology.

On the right side of the slide, there is a small video thumbnail of a participant named "Ranu Gupta". The Zoom interface at the bottom shows various controls like Unmute, Start Video, Security, Participants (119), Share Screen, Chat, Pause/Stop Recording, Reactions, Settings, and a Leave button. The system tray at the bottom indicates the time is 10:29 on 22-11-2021.

The screenshot shows a Zoom meeting window. The main content is a presentation slide with a green brushstroke background. The slide title is "Any Questions?". Below the title, there are three images:

- A photograph of a large audience in a lecture hall.
- A small video thumbnail of a participant.
- A cartoon illustration of a person thinking, with a question mark above their head, next to a smartphone.

At the top of the slide, there is a large question mark. The Zoom interface at the bottom shows various controls like Unmute, Stop Video, Security, Participants (119), Share Screen, Chat, Pause/Stop Recording, Reactions, Settings, and a Leave button. The system tray at the bottom indicates the time is 10:34 on 22-11-2021.



Awareness Session

On

“Health and Hygiene”

The Department of Mathematics in collaboration with NSS Unit, Janki Devi Memorial College, University of Delhi successfully organised an awareness session on “Health and Hygiene”. The session was organised for the slum children of Shadipur on the occasion of ‘Joy of Giving Week’ (2nd October 2021 – 8th October 2021) on 5th October, 2021 at 7:00 p.m. via Google meet.

The objective of this session was to spread awareness about the importance of Personal hygiene, Food hygiene, Environmental hygiene, Communicable diseases and Healthy lifestyle in our daily life for the slum children.

The session started with the blessings of honourable Principal Prof. Swati Pal through a message sent by her as she was not able to come due to some important work which provided boost to the session.

This was followed by some motivational words by our program co-ordinators of NSS Unit and mathematics department which encouraged all the volunteers as well as the slum children.

Afterwards the introductory address was given by Shikha Chaudhary, Treasurer, Student’s Union of Department of Mathematics. Further she welcomed all the participants and the five speakers who voluntarily participated to aware the children and to promote the need of standing up for social cause.

Our first speaker Ms. Binita Behura of NSS Unit, JDMC explained everyone about ‘Personal Hygiene’ and its importance. She also gave tips to keep ourselves personally hygienic in different ways. The second speaker Ms. Shivi Mehandirata of 2nd year Maths (H) described the topic ‘Food Hygiene’ which included

the importance of healthy food and balanced diet. She also explained the reasons to avoid junk food. Third speaker was Ms. Priya of 2nd year Maths (H) who simplified the meaning of ‘Environment Hygiene’, which included the ways in which we can keep our surroundings clean. Our fourth speaker Ms. Charu Sharma of 2nd year Maths (H) clarified the doubts of the children on ‘Communicable Diseases’ followed with a brief explanation of communicable diseases like Covid-19, Hepatitis A, etc. which included their symptoms and the preventions from these diseases. Our last speaker Ms. Ayushi Jain of 2nd year Maths (H) threw light on ‘Healthy lifestyle’ who concluded with clarifying all the doubts of the children about health and the daily activities that can help us to live a healthy life.

The session turned out to be very interactive. All the participants cooperated sincerely and actively by answering the questions asked by the speakers.

After that Dr. Sharda Sharma Gautam, Teacher In-charge, Department of Mathematics interacted with the slum children to which they responded very energetically. She took feedback from them related with the session and encouraged them to apply these activities in their routine life. It was followed by an inspiring speech from Dr. Mukta Garg, Association In-charge, Department of Mathematics.

The session was well attended by 70+ participants and it ended with a vote of thanks proposed by Ms. Nikita, Vice President, Student’s Union of Mathematics Association (2021-22) on behalf of Department of Mathematics and NSS Unit, Janki Devi Memorial College.

POSTER OF HEALTH AND HYGIENE

Janki Devi Memorial College
Department of Mathematics
In collaboration with
National Service Scheme
Presents
a session on
Health and Hygiene

EVENT PLATFORM:
GOOGLE MEET

DATE:
5th OCTOBER 2021

TIME:
7:00 PM

On the occasion of

Joy of giving week

Dr. Jayanti P. Sahoo
(Program Co-ordinator, NSS)
Dr. Rajinder Kumar
(Co-coordinator, NSS)


Dr. Amarjeet Singh
Dr. Mukta Garg
(Co-ordinators)

Dr. Sharda S. Gautam
(Teacher In-Charge)

Prof. Swati Pal
(Principal)

PICTURES OF HEALTH AND HYGIENE

MITALI 20math935 is presenting




Mathematics department
in Collaboration with
NSS JDMC
PRESENTS
A SESSION ON
HEALTH & HYGIENE

7:18 PM | acy-zmmi-fbd

62 others

You

MITALI 20math935 is presenting




- ☆ Importance of food
- ☆ Importance of balanced diet
- ☆ Food hygiene
- ☆ Importance of food hygiene

7:35 PM | acy-zmmi-fbd

61 others

You

MITALI 20math935 is presenting



take necessary rest

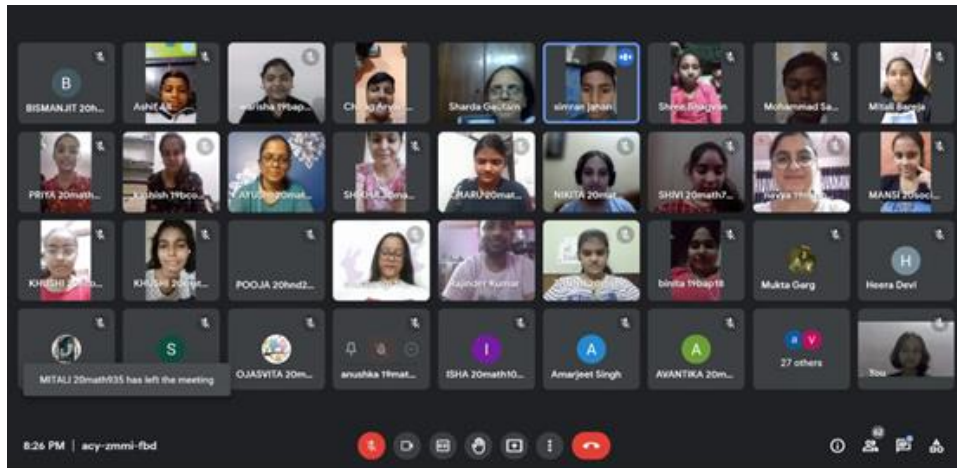
cut your nails Regularly

comb your hairs

7:27 PM | acy-zmmi-fbd

68 others

You



Department Elections

RADIAN-CE, The Mathematics Society conducted its annual departmental election for the year 2021-22 on September 1, 2021. The entire department set out to vote digitally (COVID times) via Google Forms on September 1, 2021. The total number of votes casted by the students between 8:30 am to 11:30 am were 148. By 12 pm, elections were conducted and the results were declared by the teacher in charge of department of mathematics, Dr. Sharda Sharma Gautam via Google meet, an online platform. Everything turned out to be so smooth, without any discrepancies and results were displayed with proper statistics as:

Navya - President

Nikita - Vice President

Shikha Chaudhary - Treasurer

Picture 1: Statistical view of results

1. President

RESULTS

Options	%	Count
900 Khushi 3A	32.43	48
973 Navya 3B	66.89	99
No Answer	0.68	1

2. Vice President

RESULTS

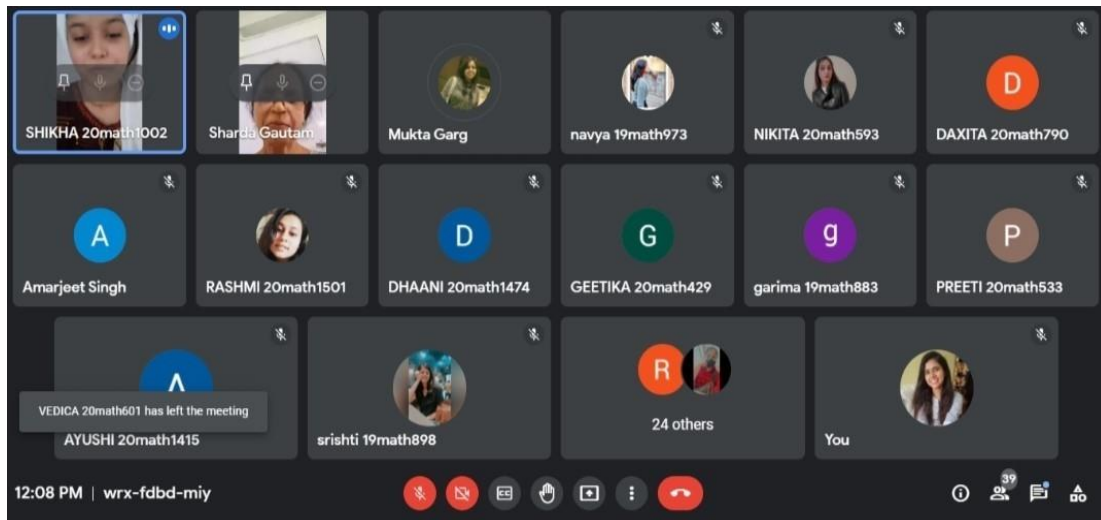
Options	%	Count
593 Nikita 2A	69.59	103
1370 Priya 2B	30.41	45

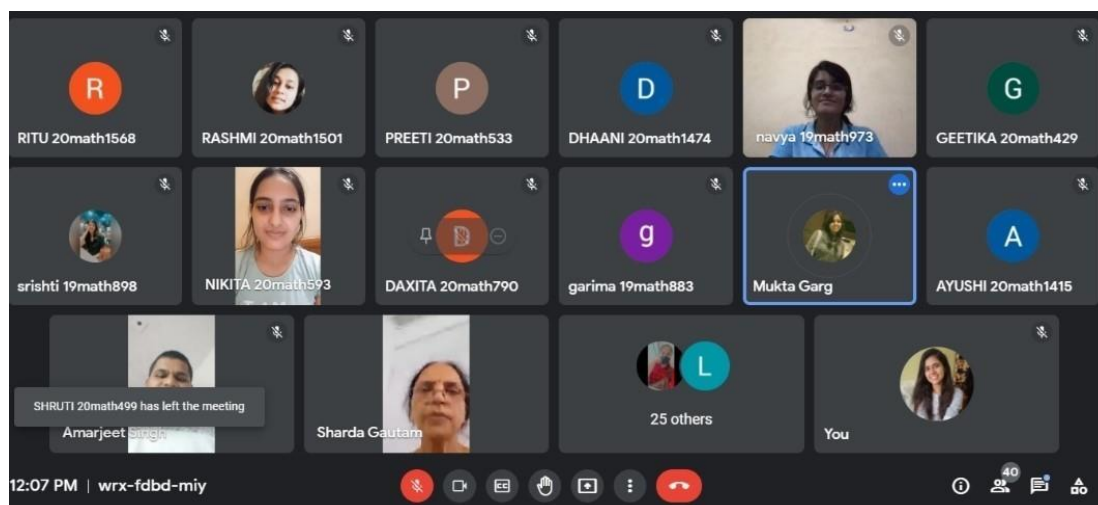
3. Treasurer

RESULTS

Options	%	Count
987 Tanya Sharma 2B	46.62	69
1002 Shikha Chaudhary 2A	52.70	78
No Answer	0.68	1

Picture 2: Results declared via Google meet





National Webinar

On

“Recent Trends in Statistical Research”

The Department of Mathematics, Janki Devi Memorial College, University of Delhi successfully organized a national webinar on “**Recent Trends in Statistical Research**”. The webinar was organized for all the students and faculty members of different universities and colleges at 11:00 am on 27th August, 2021 via Zoom handle.

Objective of the webinar was to make participants familiar with various statistical trends in the current data-driven era.

The webinar started with the welcome address proposed by honorable Principal Prof. Swati Pal; her enlightening words provided a necessary boost to the session.

This was followed by an introductory address by Dr. Sharda Sharma Gautam, Teacher In-charge, Department of Mathematics. She highlighted the importance of various statistical models and further welcomed the speaker.

The resource person for the webinar was Prof. Somesh Kumar, Department of Mathematics, IIT-Kharagpur.

He explained the importance of various statistical tools and their usage. He talked about Sampling, Sample Mean, Sample Variance, Chi Square Test, Student’s t-Distribution, Fischer’s Distribution and other statistical techniques that are used nowadays. He also talked about data analytics and how is it an emerging career option.

There was an overwhelming response from the audience which was extremely interactive throughout the Q&A round and proved to be yielding.

The webinar was attended by 210+ participants from different domains and colleges. The webinar ended with a vote of thanks proposed by Ms. Ayushi Jain, General Secretary, Students' Union of Mathematics Association (2020-21) on behalf of Department of Mathematics.

Feedback, using Google form was also sought after the event. The analysis of the responses from the participants revealed that approximately **91.6% of the participants rated the webinar in the higher category** in the overall rating and **98.2% expressed their willingness to attend such programs in future.**

Poster of Recent Trends in Statistical Research



The poster is for a national webinar titled "Recent Trends in Statistical Research" presented by Janki Devi Memorial College, University of Delhi, Department of Mathematics. The speaker is Prof. Somesh Kumar from the Department of Mathematics at Indian Institute of Technology, Kharagpur. The webinar is scheduled for Friday, August 27th, 2021, from 10:45 AM to 11:00 AM on the Zoom App. A registration link is provided: <https://forms.gle/3df6tfpy3fQ32SwL6>. E-certificates will be provided to all participants. The convenors are Dr. Amarjeet Singh & Dr. Mukta Garg, the teacher in-charge is Dr. Sharda S. Gautam, and the principal is Prof. Swati Pal. Contact information for queries is provided at the bottom.

Janki Devi Memorial College
(University of Delhi)
Department of Mathematics
presents
National Webinar
on
**RECENT TRENDS IN
STATISTICAL RESEARCH**

Prof. Somesh Kumar
Department of Mathematics,
Indian Institute of Technology, Kharagpur

Date: 27th August 2021, Friday
Login Time: 10:45 AM
Time: 11:00 AM
Platform: Zoom App

Registration Link:- <https://forms.gle/3df6tfpy3fQ32SwL6>

E-certificates will be provided to all the participants

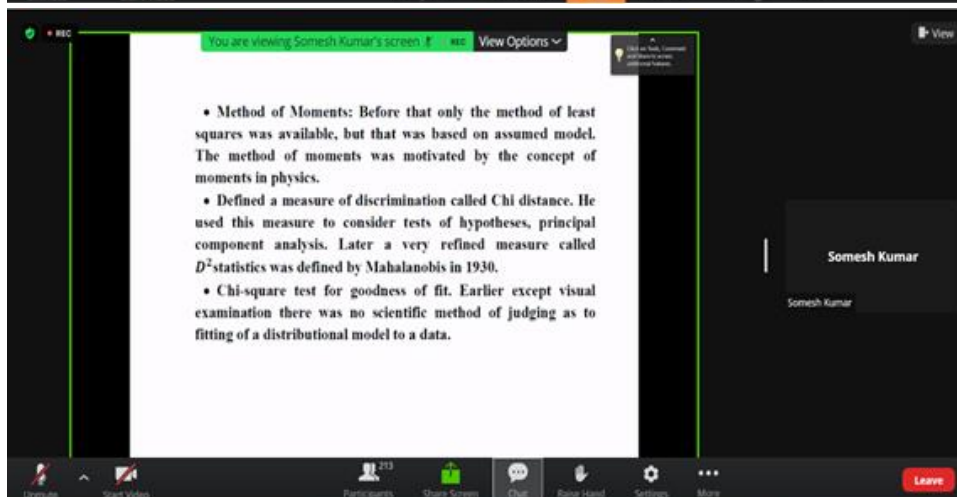
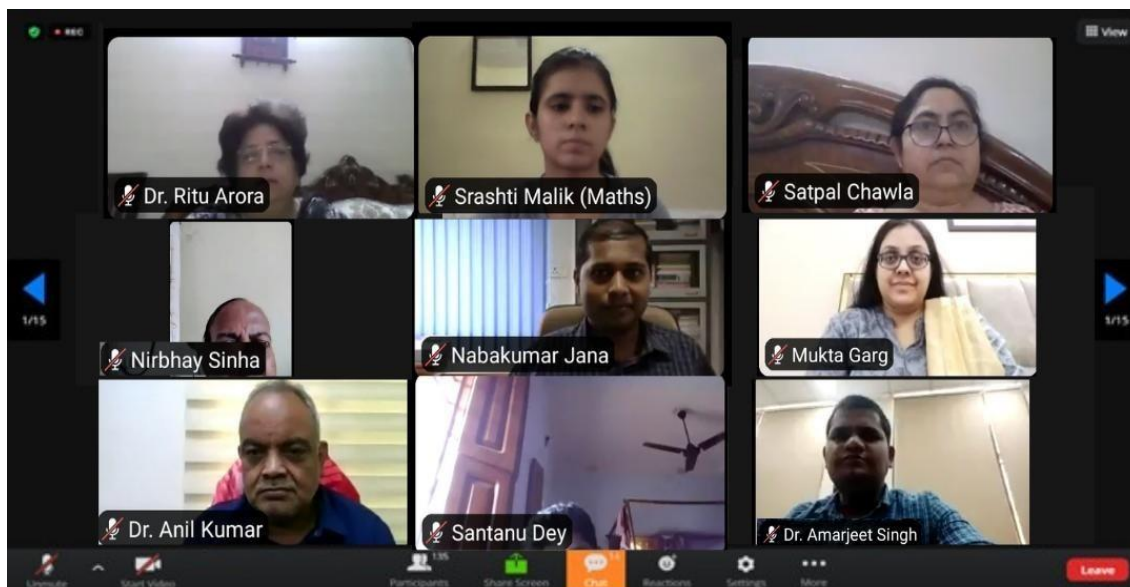
Dr. Amarjeet Singh &
Dr. Mukta Garg
(Convenors)

Dr. Sharda S. Gautam
(Teacher In-charge)

Prof. Swati Pal
(Principal)

For queries, contact: [✉ jdm.maths@gmail.com](mailto:jdm.maths@gmail.com) | [📷 radiance_jdmc](https://www.instagram.com/radiance_jdmc)

Pictures of Recent Trends in Statistical Research



National Webinar

On

“Modern Optimization Techniques to Solve Real Life Problems”

The Department of Mathematics, Janki Devi Memorial College, University of Delhi organized a national webinar on **“Modern Optimization Techniques to Solve Real Life Problems”**. The webinar was organized for all the students and faculty members of different universities and colleges at 11:00 am on 26th July, 2021.

Objective of the webinar was to make participants familiar with various modern optimization techniques which are used everywhere, from genetic engineering to financial markets, fashion technology to mass communication and also in our daily activities.

The webinar started with the welcome address proposed by Dr. Sharda Sharma Gautam, Teacher In-charge, Department of Mathematics. She highlighted the importance of optimization techniques in today’s world.

The resource person for the webinar was Prof. Kusum Deep, Department of Mathematics, IIT- Roorkee.

She explained the optimization problems and its local and global optimal solutions. She discussed various nature inspired optimization techniques such as random search technique, genetic algorithm, particle swarm optimization, artificial bee colony, firefly algorithm, ant colony optimization and many more. She further explained applications of optimization techniques to real life problems such as air defense systems, radiation treatment using circle packing, forecasting of avalanches etc. She illustrated everything beautifully with the help of some video clips.

There was an overwhelming response from the audience which was extremely interactive throughout the Q&A round and proved to be yielding.

The webinar was attended by more than 190 participants from different domains and colleges.

Feedback, using Google form was also sought after the event. The analysis of the responses from the participants revealed that approximately **94.3% of the participants rated the webinar in the higher category** in the overall rating and **97.2% expressed their willingness to attend such programs in future.**

Poster of Modern Optimization Techniques to Solve Real Life Problems



Janki Devi Memorial College
(University of Delhi)



Department of Mathematics

presents

National Webinar

on

**"Use of Modern Optimization Techniques
to Solve Real Life Problems"**

Prof. Kusum Deep

Department of Mathematics
Indian Institute of Technology, Roorkee



Date: 26th July 2021, Monday

Login Time: 10:45 AM

Time: 11:00 AM

Platform: Zoom App

E-certificates will be provided to all the participants

Registration Link:-

<https://forms.gle/aUkjMjYu4KbiNAFX8>

Dr. Amarjeet Singh &
Dr. Mukta Garg
(Convenors)

Dr. Sharda S. Gautam
(Teacher In-charge)

Prof. Swati Pal
(Principal)

For queries, contact:- Srashti: 8171420207 | Srishti: 9418820998

Pictures of Modern Optimization Techniques to Solve Real Life Problems



REC

You are viewing Kusum Deep's screen

View Options

NON LINEAR OPTIMIZATION PROBLEM

Minimize (Maximize) $f(X)$
where $f: \mathbb{R}^n \rightarrow \mathbb{R}$, $X = (x_1, x_2, x_3, \dots, x_n)$
s.t. $X \in S \subseteq \mathbb{R}^n$, where S is defined by
 $g_k(X) \geq 0$, $k = 0, 1, 2, \dots, m$
 $h_j(X) = 0$, $j = 0, 1, 2, \dots, l$
 $x_{\min_i} \leq x_i \leq x_{\max_i}$

Kusum Deep

Audio

Start Video

Participants 188

Share Screen

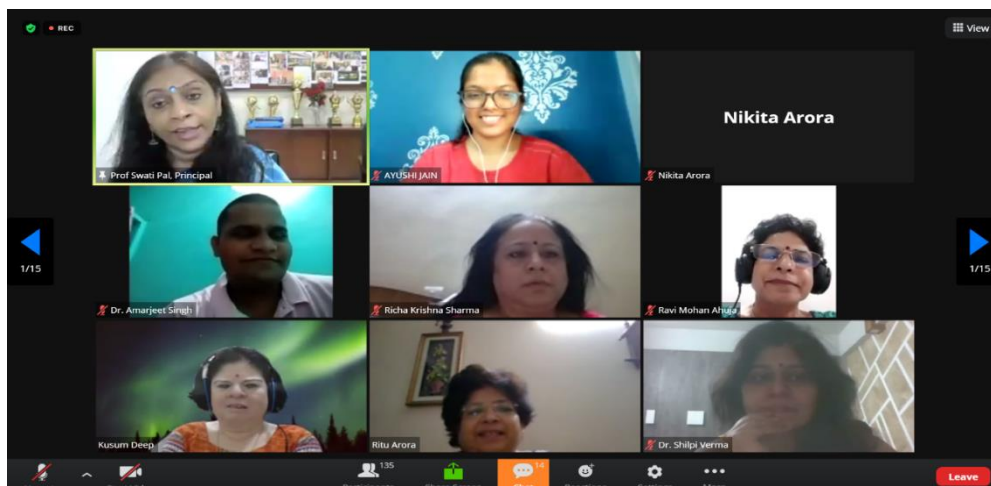
Chat

Reactions

Settings

More

Leave



Mentoring Session

The IQAC and Department of Mathematics, Janki Devi Memorial College, University of Delhi organized a mentoring session with Prof. Swati Pal, Principal of JDMC at 10:00 am on 15th July, 2021. It was organized for all the students of the mathematics department.

The session commenced with the Principal, Prof Swati Pal reiterating the importance of integrity among everyone. She talked about various add-on courses being organized by different departments of our college and threw light on the importance of such courses in our personality development. She guided the students to identify their interests and encouraged them to come up with their own add on courses. She also advised them to work on a research project and to write some research papers. Moreover, She told all the faculty members of the department to together write a book by December.

The session was attended by around 125 participants. It was very informative and enriching for all the students.

Pictures of Mentoring Session



