

DEPARTMENT OF CHEMISTRY  
**WELCOMES**  
NAAC PEER TEAM



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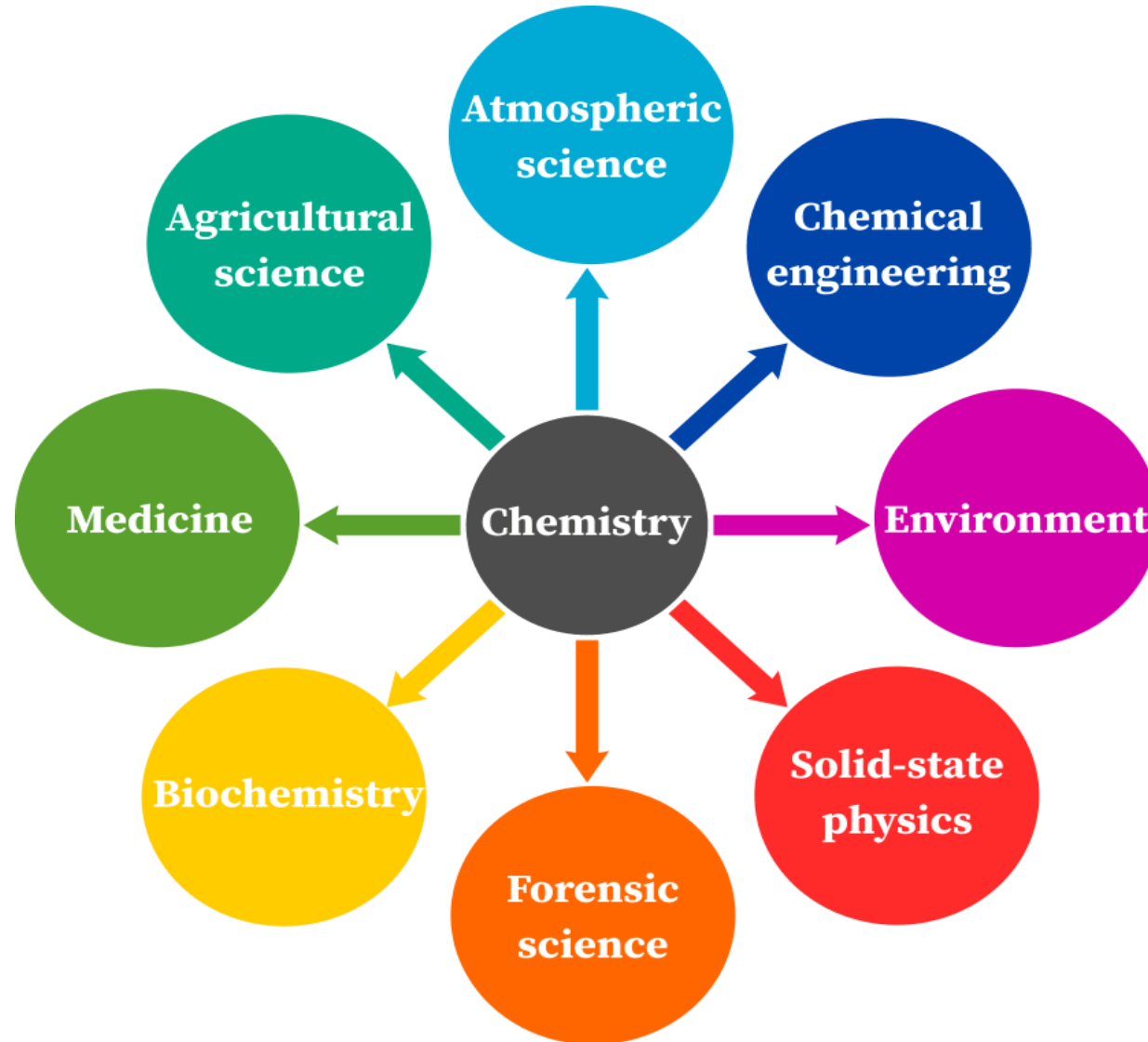
## **6. BEST PRACTICES ADOPTED**

## **7. SWOC ANALYSIS**

# **About the Department**

## **(Came into existence in 1967)**

# Chemistry as a Central Science





# Courses Offered

## NEP

- BSc.(H) Chemistry
- VI/VIII Semester Course
- I Batch 2022-23

## CBCS

- BSc. (H) Chemistry
- VI Semester Course
- Last Batch 2023-24

## Chemistry As Major Subject (Core)

- BSc. Prog. Life Science
- BSc. Prog. Physical Science

## Chemistry as Generic Elective Paper (GE) for students of other science and humanities courses

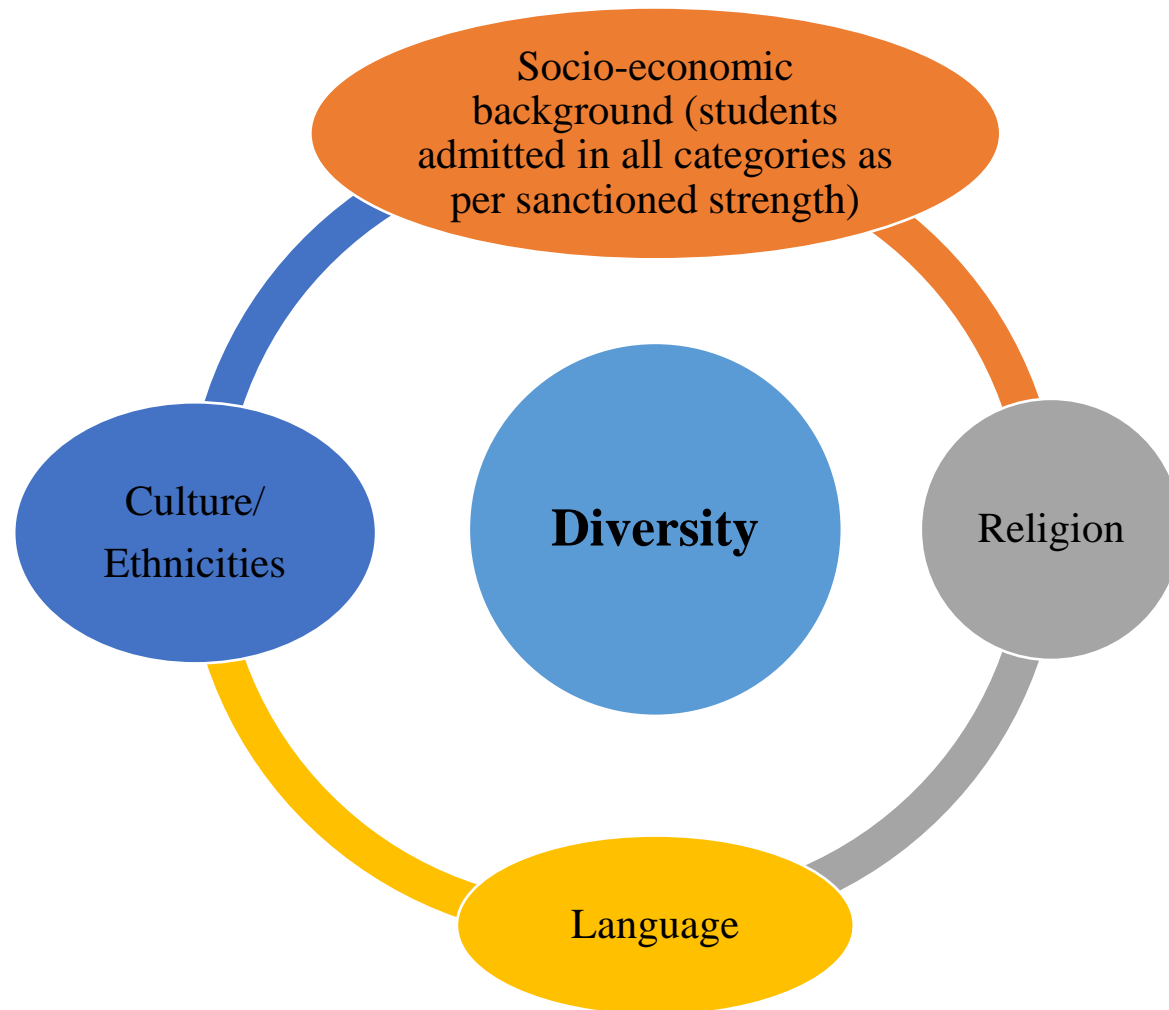
- BSc. (H) Botany, Zoology & Microbiology,
- BSc. (H) Mathematics & Physics,
- BA (H) students

## Post Graduation in Chemistry

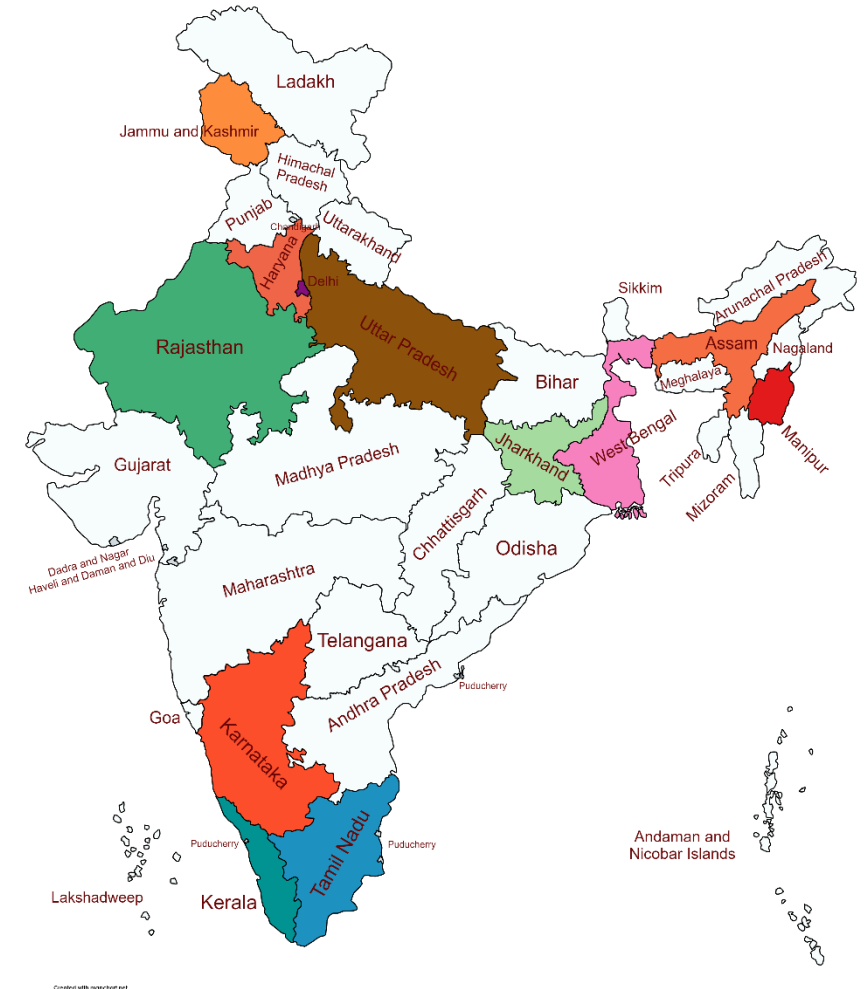
- MSc Chemistry (the classes are held in the University, however students are enrolled in College)

# Student Diversity

Students from states across India enroll into Chemistry (H) course  
One **international student** from **Maldives** in the batch of 2016-2019



In the map below, states from which most students come to study BSc (H) Chemistry **are highlighted**



# Infrastructural Facilities in the Department



**Lab 1 & 2**



**Lab 3**



**Instrument Lab 1**



**Instrument Lab 2**

- 3 well-equipped Chemistry Laboratory
- 2 Instrument Labs
- 1 Preparation room for making solutions, reagents etc.
- 1 Store room for storing chemicals, instruments, glass apparatus and other consumable items.
- 1 Lab Facilities room

# Equipment Purchased

Laboratory equipment were purchased under  
**Star College grant, XII plan, Innovation projects, Start-up project**

These include:



**Digital pH-meter with combined  
 electrode FGLI-120**



**Digital Conductivity Meter  
 Model FGCM-180**



**Photometer with 8  
 filters FGCI 63**



**Systronics Make Visiscan  
 Visible Spectrophotometer  
 Model 167**



**REMI Make Centrifuge  
 Model- RM-12C**



**Vacuum Rotary Evaporator**



**Vacuum Oven**



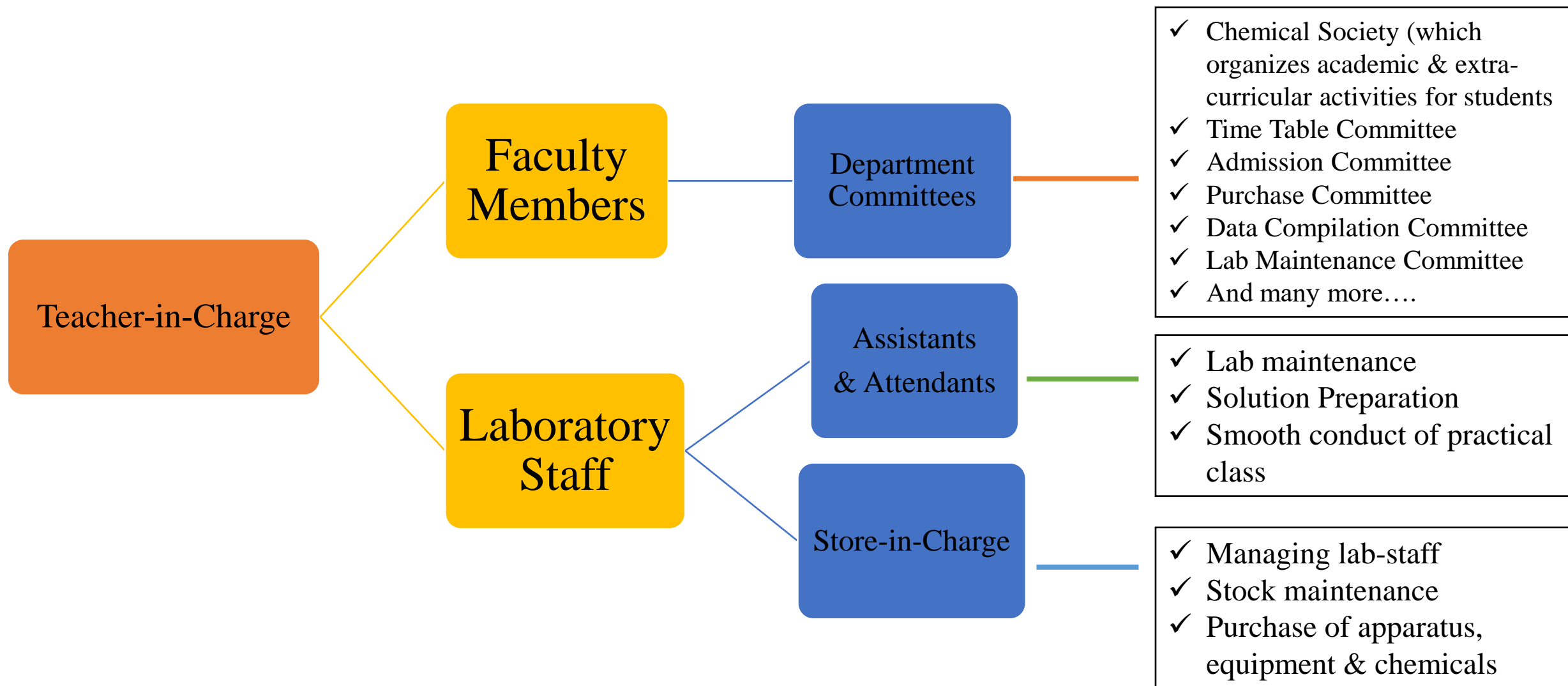
# Well-stocked Departmental Library

- ✓ The Department of Chemistry has its own **Departmental Library**.
- ✓ It has **books donated by retired teachers and ex-students**.
- ✓ Students of chemistry department can issue books on weekly basis.
- ✓ At present, there are about **200 books** in library.
- ✓ Include books from all specialization – physical, organic, inorganic, environmental, green chemistry etc. based on theory, practical and problem solving





# Governance in Department



# Laboratory Staff



**Total Laboratory Staff – 14**

**Assistants – 07**

**Attendants – 07**



# **About the Faculty**



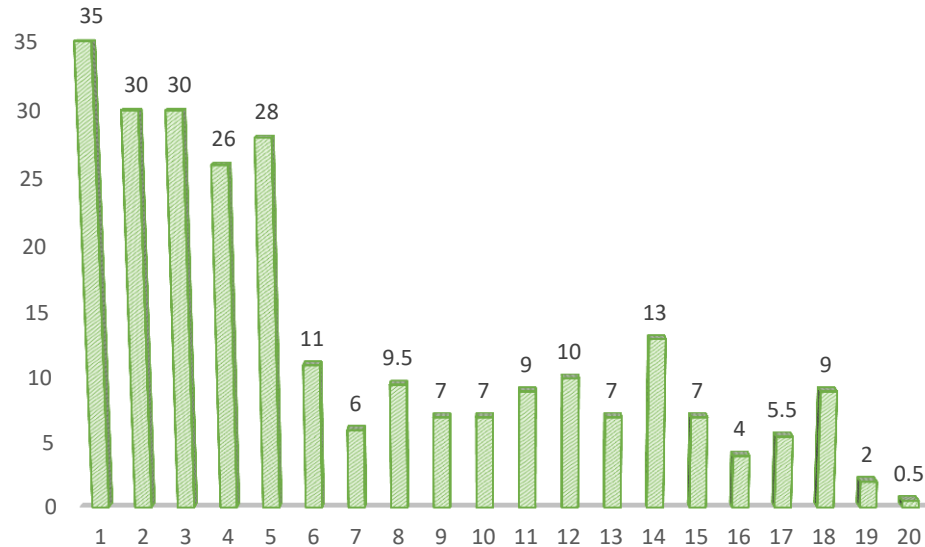
# Faculty of the Department



**From left to right – Dr. Himani Chauhan, Dr. Renu Gautam, Dr. Poonam Kumari, Dr. Manisha Singla, Dr. Niyati Singh, Dr. Geeta Saini, Dr. Manju Saroj, Dr. B. Vijayanthi, Dr. Uttara Dutta, Dr. Chandana Mukherjee, Dr. Renu Aggarwal, Dr. Tripti Kumari, Dr. Neha Sharma, Dr. Chingrishon Kathing, Dr. Taruna Singh, Dr. M. Sarath Babu**

# Faculty Profile

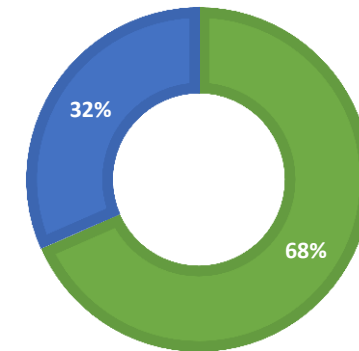
TEACHING EXPERIENCE (IN YEARS)



Associate Professors	05
Assistant Professors	15
<b>TOTAL</b>	<b>20</b>

All the Faculty members are Ph.D.

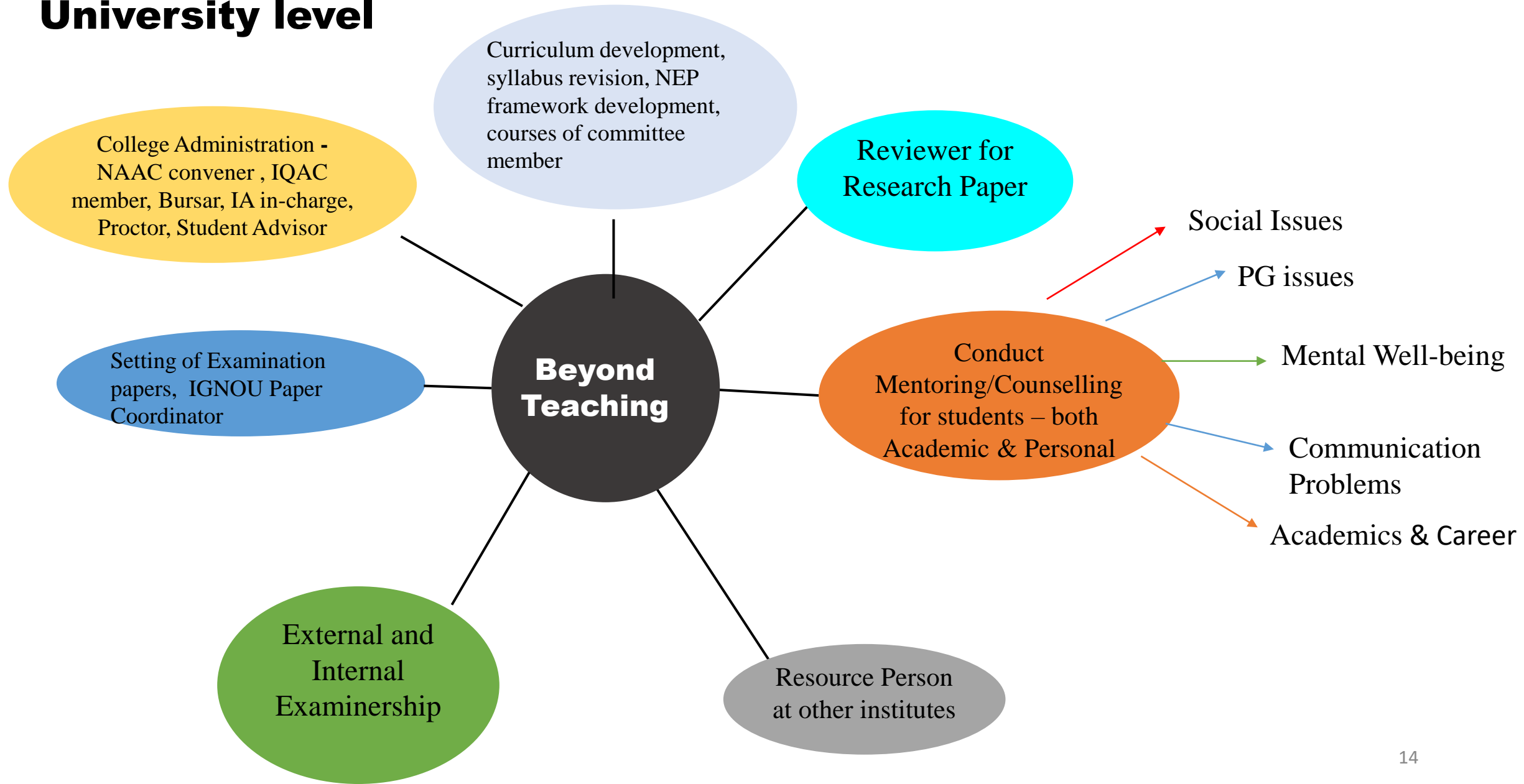
PhD from  
■ Delhi University ■ Other University



Five of the faculty members superannuated during 2016-2022; Dr. Indu Tucker Sidhwani, Dr. Sushmita Chowdhury, Dr. Keya Banerjee, Dr. Sushma Bhan, Dr. Anita Chugh



# Beyond Teaching - Faculty involvement in activities at College & University level



# Teaching Methods adopted by our faculty

Covid Times



Videos & lectures during Online teaching – Google Classrooms, Google Meet, Audio Recordings, Links to virtual labs for certain experiments etc.

Conventional chalkboard method of teaching

ICT enabled teaching methods like presentations, Youtube video, E content

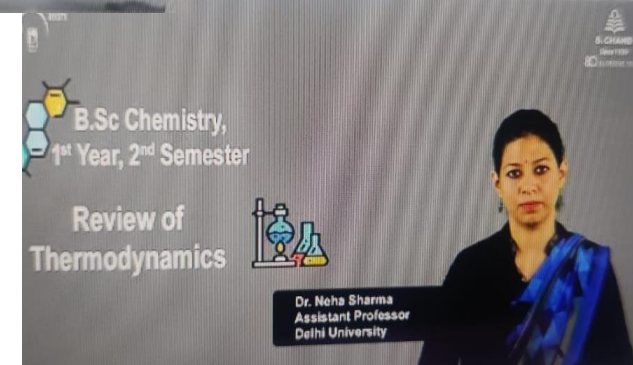
Extra classes for weak students

Presentation, assignments, problem-solving worksheets & group discussions

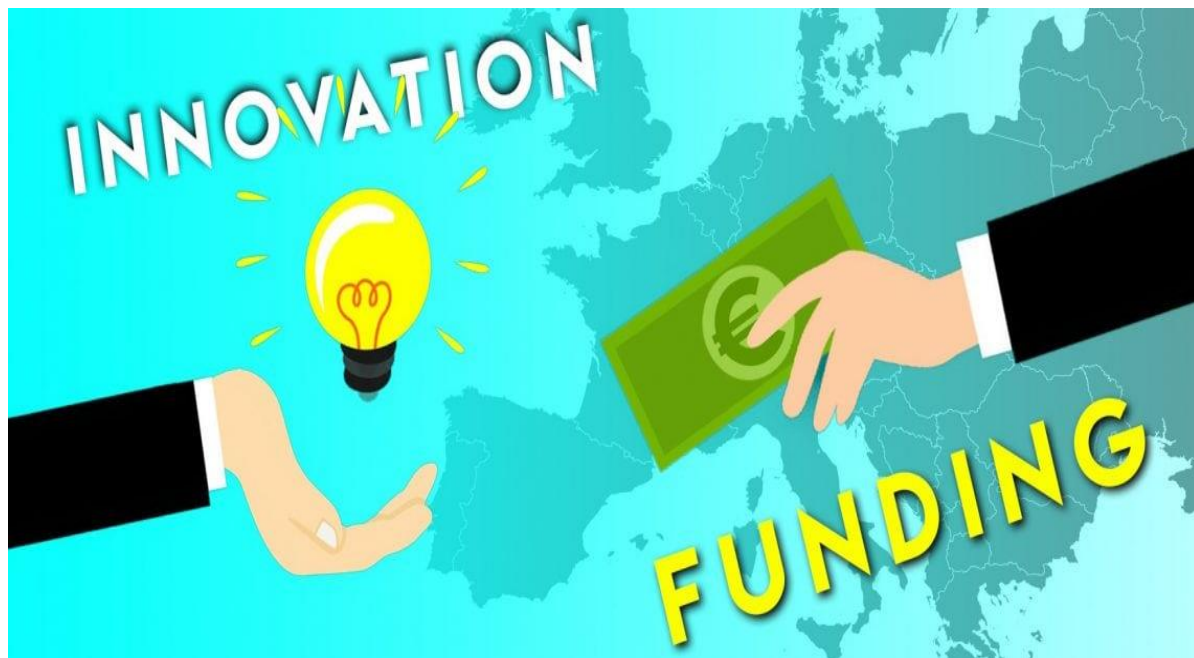


Some you-tube links for lectures:

- ▶ <https://youtube.com/channel/UCiB32CfOFDQpD60IFoXDJVA>
- ▶ <https://www.youtube.com/watch?v=wBrJN0n1Veo&t=224s>
- ▶ <https://youtube.com/watch?v=0Lg6tSvJAsQ&feature=share>



# Major Research Grants Received by Faculty



## **Dr Indu Tucker Sidhwani**

Amount: 5 Lakhs

Period: 1 year (2016-17)

Funding Agency: University of Delhi Innovation

Title: *“A Green and Sustainable Chemistry Laboratory - A distant dream or a Reality...”*

## **Dr Beena Negi**

Amount: 10 Lakhs

Period: 2 years (2017-19)

Funding Agency: UGC BSR Start UP

Title: *“Design, SAR, docking studies and anticancer activity evaluation of novel benzothiazole linked hybrids”*

# Awards Received by Faculty

**Dr. Renu Aggarwal** received the  
**“Meritorious Teacher Award”**  
 from the **Directorate of Higher  
 Education, Government of NCT  
 of Delhi** in 2017.

GOVERNMENT OF NCT OF DELHI  
 DIRECTORATE OF HIGHER EDUCATION  
 B-WING, 2<sup>ND</sup> FLOOR, 5-SHAM NATH MARG, DELHI-110054  
 Email: [dtchedu@gmail.com](mailto:dtchedu@gmail.com)

No.F.DHE-9(18)/AFCL/2016-17/ 1695

Dated:- 28/03/2018

To

The DDO,  
 Directorate of Higher Education,  
 B-Wing, 2<sup>nd</sup> Floor, 5-Sham Nath Marg, Delhi-54.

Subject: Expenditure Sanction under scheme 'Award for College Lecturer' during the financial year 2017-18.

Madam,

I am directed to convey the sanction of the Pr.Secretary (HE), GNCTD for expenditure sanction of Rupees Nineteen Lakhs for the payment of awards to the College Teachers/ Lecturers under the scheme "Award for College Teacher/ Lecturer" during the current financial year 2017-18 for selected lecturers out of the nominations received during 2016-17. As per norm of the scheme, each of the following 19 lecturers selected by the Selection Committee will be provided the award of Rs.1 lakh through ECS in their Aadhaar seeded bank account:

S. No.	Name of the College/ University	Name of the Lecturer	Amount
1	Aditi Mahavidyalaya	Dr.Manisha Wadhwa, Associate Professor, Education	Rs.1,00,000/-
2	Acharya Narendra Dev College	Dr.Seema Gupta, Associate Professor, Chemistry	Rs.1,00,000/-
3	Bhagini Nivedita College	Dr.Vandana Sharma, Associate Professor, Music	Rs.1,00,000/-
4	Bhaskaracharya College of Applied Sciences	Dr.Avneesh Mittal, Assistant Professor, Electronics	Rs.1,00,000/-
5	Deen Dayal Upadhyaya College	Dr.Charu Kalra, Assistant Professor, Botany	Rs.1,00,000/-
6	Gargi College	Dr.Renu Aggarwal, Associate Professor, Chemistry	Rs.1,00,000/-
7	Kalindi College	Dr.Pushpa Bindal, Associate Professor, Physics	Rs.1,00,000/-
8	Laxmi Bai College	Dr.Sucheta Gauda, Assistant Professor, Commerce	Rs.1,00,000/-
9	Motilal Nehru College	Dr.Anu Pandey, Assistant	Rs.1,00,000/-



# Awards Received by Faculty



**Dr. Tripti Kumari** received a prize for an **Oral Presentation** at the **International Conference on the Contributions of Acharya Prafulla Chandra**

organized by  
**Indraprastha Vigyan Bharti and Ministry of Culture, Government of India** in association with **Department of Chemistry, University of Delhi** on Aug 2-3, 2022

Receiving the memento from the Hon'ble Minister of State for Education Dr. Subhas Sarkar



# Faculty Publications

**Total  
Number**



## Some of the Publication Journals

- Eur. J. Med. Chem
- RSC Adv
- Journal of Heterocyclic Chemistry
- Current Protein & Peptide Science

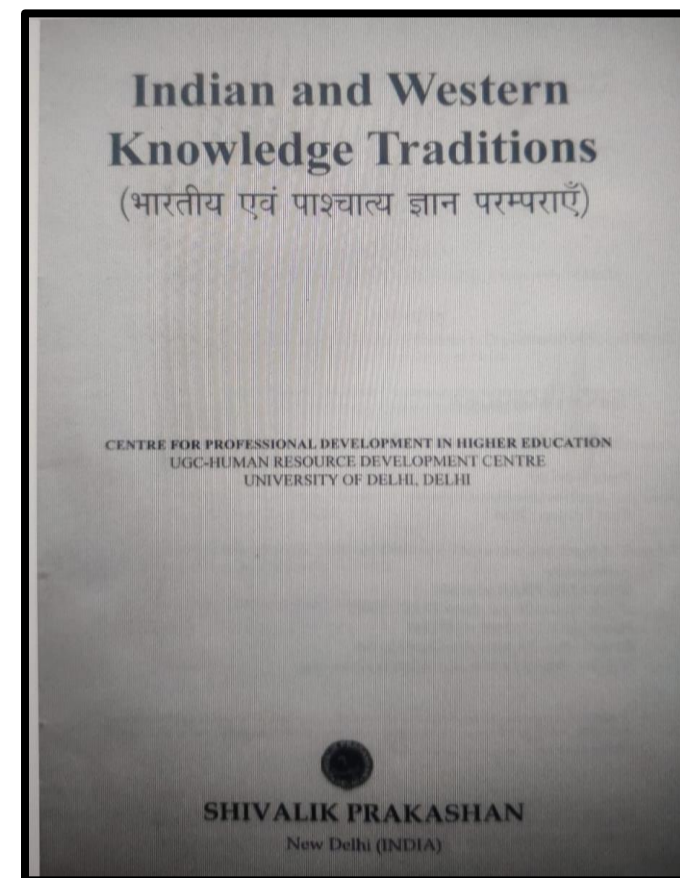
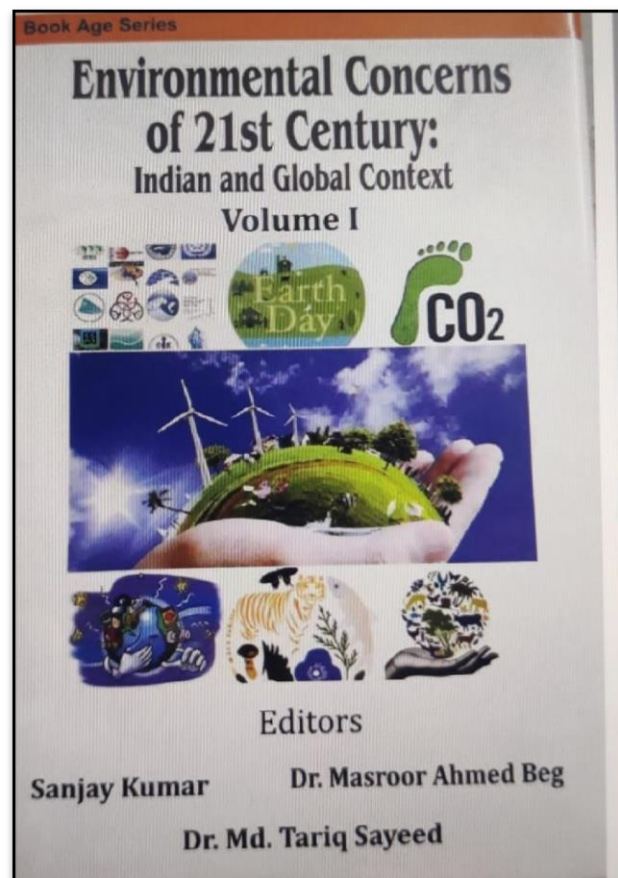
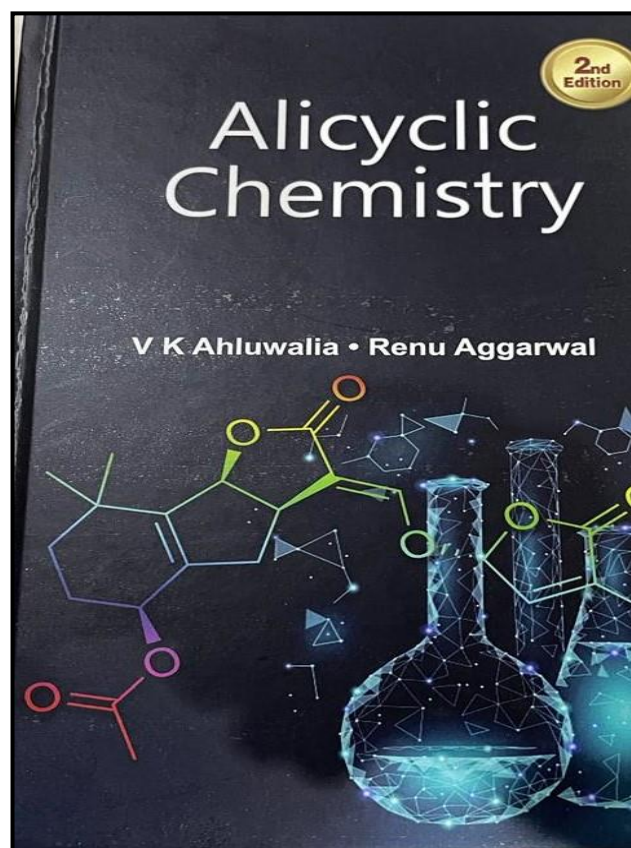
- IOP Nanotechnology
- Computational and Theoretical Chemistry
- Journal of Luminescence
- Journal of Molecular Liquids

- Journal of Molecular Modelling
- Chemical Papers
- Structural Chemistry
- Journal of Material Nano Science

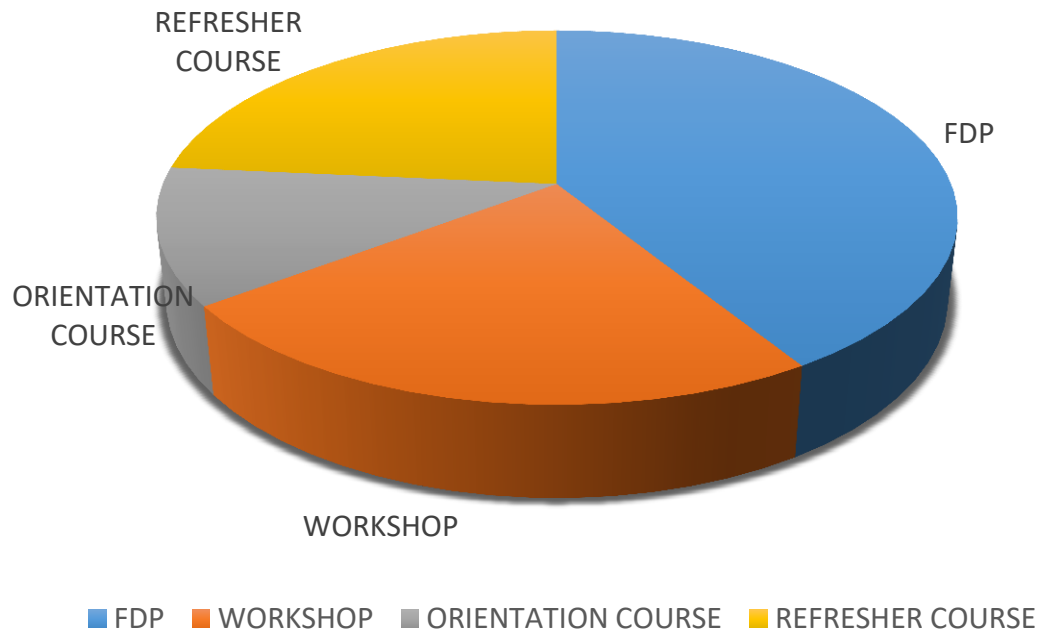
# Book Written – 01

## Chapter in Books by Faculty – 05

## Publication in Conference Proceedings - 02



# Faculty Enrichment Programmes Attended



## Total Programs Attended

FDP:	21
WORKSHOP:	12
ORIENTATION PROGRAM:	6
REFRESHERCOURSE:	12



Most Orientation and Refresher Courses were attended by our faculty in offline mode.

During Covid, online FDPs were organized which were also attended by our faculty members.

# Faculty as Members of National Committees

- ✓ Indian Society of Analytical Chemists
- ✓ Green Chemistry Letters and Reviews
- ✓ Indian Science Congress Association
- ✓ Indian Society of Analytical Chemists
- ✓ Green Chemistry Network Centre
- ✓ Indian Society of Technical Education
- ✓ Association of Chemistry Teachers



# Faculty as Resource persons at other institutions

## Dr. Tripti Kumari

- Delivered several invited lectures at **Nehru Memorial Museum and Library, Nehru Planetarium**
- Invited as the “**moderator**” of the **Panel Discussion Event** at the National Conference on “Innovations in Chemistry Laboratory Teaching” held in **Zakir Husain Delhi College** on February 8-9, 2017.



Nehru Planetarium New Delhi is with Tripti Kumari.

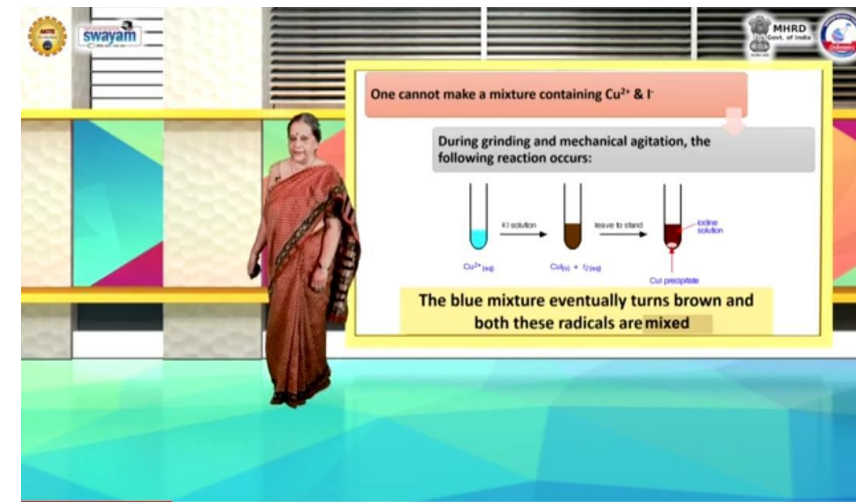
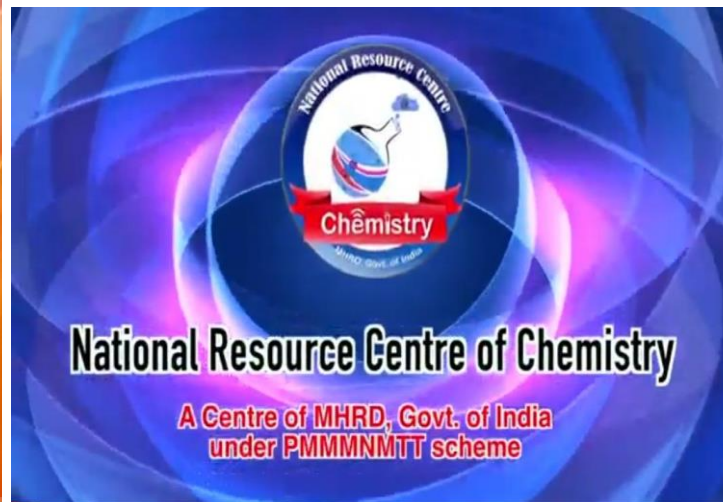
25 Sep 2020 · 🌐

Nehru Planetarium, Nehru Memorial Museum, and Library invite you to its fourth exciting session of the series “Chemistry Tales to Tell”, on September 26, 2020, from 4:00 pm onwards. The session will be taken by Dr. Tripti Kumari, Assistant Professor working in the Department of Chemistry, Gargi Coll... See more





# Development of E-content under SWAYAM ARPIT 2019



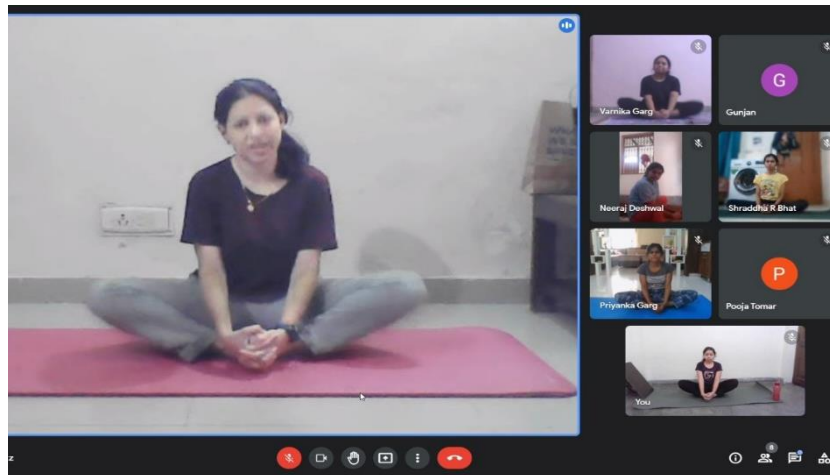
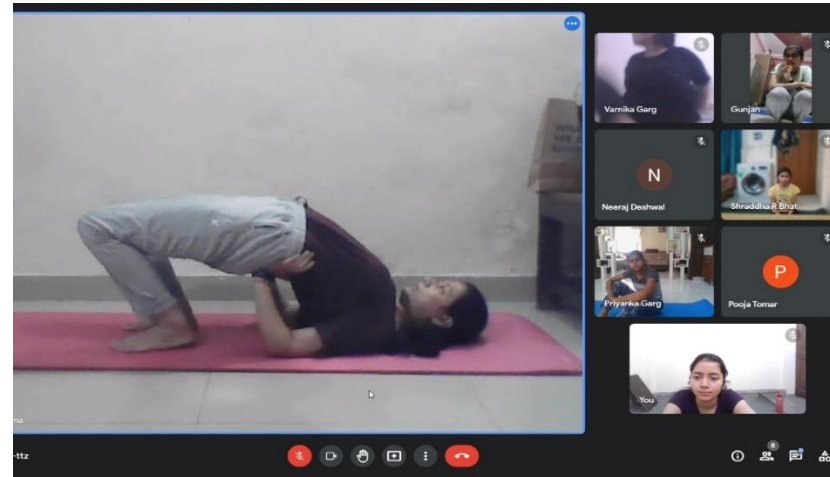
You-tube link for the lecture:

<https://www.youtube.com/watch?v=3z7-T9dHTRs&t=16s>

**Dr. Sushmita Chowdhury** authored (Co-author: **Dr. Tripti Kumari**) and presented an **E-module** on Mixture Analysis Made Easy in August 2019 at the ARPIT 2019 (Annual Refresher Programme in Teaching in Chemistry) organised by the **National Resource Centre of Chemistry of MHRD, Govt of India** under the PMMMNNTT scheme.

# Faculty as Qualified Yoga Teacher

- Dr. Neha Sharma is a **Certified Yoga Instructor** & attended Yoga courses from :
  - Morarji Desai National Institute of Yoga
  - Lakulish Yoga University
- She teaches Yoga to students and faculty and has taken online Yoga classes for students in Covid times



**Workshops/Seminars/Conferences  
/Webinars/Add-on & Outreach  
Programmes  
organized by the  
Department of Chemistry**







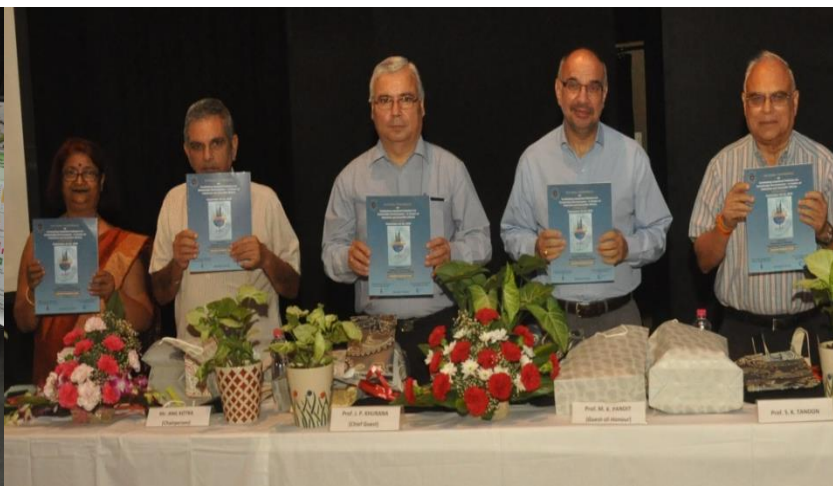
# National Conference

## Combating Industrial Pollution for Sustainable Environment: A Fusion of Industrial and Scientific Efforts

September 22-23, 2016

**Sponsored by: Indian Council of Social Science Research (ICSSR), New Delhi  
Science and Engineering Research Board (SERB), New Delhi**

- Participation from **students, faculty, researchers, industrialists** and **environmentalists** from various departments and colleges of University of Delhi as well as other institutes and universities.
- Resource Persons from renowned institutes like **Central Pollution Control Board, Ministry of Forest & Environment, JNU, CPPRI, IISER, CSE, FICCI, PHFI** etc.
- **25 oral & 70 poster presentation.**
- **180 Teachers and 350 students** participated



**PATRON**  
Dr. Shashi Tyagi (Principal Offg.)

**CONVENERS**  
Dr. Sushma Bhan, Associate Professor  
Dr. Rita Bhatia, Associate Professor  
Dr. Renu Aggarwal, Associate Professor

**COORDINATORS**  
Dr. Geeta Seini, Assistant Professor  
Dr. Tripti Kumari, Assistant Professor  
Ms. Salma Khan, Assistant Professor

**ORGANIZING COMMITTEE**  
Dr. Indu Tucker Sidhwani  
Dr. Sushmita Chowdhury  
Dr. Anita Chugh  
Dr. Keya Bhanjee  
Dr. Uttara Dutta  
Dr. Chandana Mukherjee  
Dr. B. Vajjayanthi

**ADVISORY BOARD MEMBERS**  
Prof. Gurmeet Singh  
Head, Department of Chemistry,  
University of Delhi  
Prof. J.M. Khurana  
OSM, Department of Chemistry,  
University of Delhi  
Prof. Rita Kakkar  
Department of Chemistry,  
University of Delhi  
Prof. R.K. Sharma  
Department of Chemistry,  
University of Delhi  
Prof. Shikant Kukret  
Department of Chemistry,  
University of Delhi  
Prof. A. K. Prasad  
Department of Chemistry,  
University of Delhi  
Prof. D.S. Rawat  
Department of Chemistry,  
University of Delhi  
Prof. R. Nagarajan  
Department of Chemistry,  
University of Delhi

**ABOUT THE COLLEGE**  
Gargi College is one of the leading institutes of the University of Delhi. It was started by Delhi Administration in 1967 to provide higher education to young women. The strength of students in the college is about 4000 across 19 different courses. Gargi College was named after an enlightened woman named Gargi, figuring in the Brihadaranyaka Upanishad of Vedic age. In the Upanishad, Gargi seems to represent the intellectual potential of the race of Homo sapiens, which continues to manifest itself, in quest of ever-widening fields of knowledge.

Following the same philosophy, we, at Gargi College, focus on all-round development of students, thereby placing equal emphasis on academic and extra-curricular activities. In 2004, the college was recognized as a Centre with Potential for Excellence by University Grants Commission. All the Science Departments of the college have received grants from the Department of Biotechnology, Ministry of Science & Technology, Government of India, to promote science education. In 2009, DBT awarded the "Star Status" to all our Science Departments. Most recently, the National Assessment and Accreditation Council (NAAC) accredited the college with "A" grade.



Logo designed by Ms. Anushka Mishra, B.Sc. (Hons.) Chemistry (2013-16)

**NATIONAL CONFERENCE**  
on  
**Combating Industrial Pollution for Sustainable Environment – A Fusion of Industrial and Scientific Efforts (CIPSE-2016)**  
September 22-23, 2016  
Department of Chemistry, Gargi College, University of Delhi



Sponsored by



Indian Council of Social Science Research (ICSSR), New Delhi





Science & Engineering Research Board (SERB), New Delhi



# National Multidisciplinary Conference on Emerging Trends in Tertiary Education: Assessing Challenges and Possibilities 29-30 March, 2019

Organized by the Department of B.A.(Prog), Chemistry, English and History



National Multidisciplinary Conference  
on  
**Emerging Trends in Tertiary Education :  
Assessing Challenges and Possibilities**  
organised by  
The Departments of  
B.A. Programme, Chemistry, English and History

→ **Date:** 29th and 30th March, 2019 ←  
→ **Venue:** Auditorium, Gargi College ←

**DAY 1**  
Keynote Address by:  
Prof. Shyam Menon

RESOURCE PERSONS:  
Prof. Anil Kumar Aneja  
Prof. Bharati Baveja  
Prof. Deepak Kumar  
Dr. Swati Pal  
Ms. Juthika Patankar  
Prof. Namita Ranganathan

**DAY 2**  
Valedictory Address by:  
Prof. Mrinal Miri

RESOURCE PERSONS:  
Prof. A.K. Bakhshi  
Dr. Brinda Bose  
Prof. Saumen Chattopadhyay  
Prof. Biswajit Das  
Prof. Apoorvanand Jha  
Prof. K. Kannan  
Prof. Simi Malhotra  
Dr. Manisha Priyam  
Dr. Hema V . Raghavan  
Dr. Poonam Verma



# Outreach Program for School Teachers



## Yusuf Hamied Inspirational Chemistry Programme - **Train the Trainer Workshop**

Organized by

Department of Chemistry in collaboration with Royal Society of Chemistry, London (India Chapter)

**24-25 October, 2016**



Develop teaching skills of school teachers

Bring innovation in teaching methodology

Share and develop teaching ideas amongst various school teachers.  
Total 29 teachers from various schools attended the workshop





**Inter-College Chemistry Workshop for  
Laboratory Staff  
July 15-16, 2016**



**Workshops  
Organized**

**Summer Workshop on  
Chemistry in Day To Day Life  
July 17 - 18, 2018**



**Inter-College Workshop on  
Green Chemistry for College Teachers  
August 13, 2016**





# Seminars & Webinars



AN INTERDISCIPLINARY NATIONAL SEMINAR  
ON  
EXPLORING NEW DIMENSIONS  
OF KNOWLEDGE  
(for undergraduate and postgraduate students)  
July 17-19, 2017

We need an education through which character is formed, strength of mind is increased, intellect is expanded and through which one can stand on one's own feet - Swami Vivekananda

**INTERNATIONAL  
YOGA DAY  
JUNE 21, 2020**

This Yoga Day, let us stay at home and celebrate our rich heritage via  
**Webinar**  
Organized by  
Gargi College  
Under the aegis of IQAC  
June 21, 2020

**Yogacharaya Mukesh ji** : Qualified Master from Ministry of AYUSH, Founder Secretary of Satyam Yoga Darshan Sewashram

Time: 11:00 am-12:30 pm Venue: At home with family

[For Registration Click here](#)

Last date of Registration: June 20, 2020  
E-certificate will be provided

Registration free

Patron  
Dr. Promila Kumar

Conveners  
Dr. Geeta Saini Dr. Neha Sharma  
Dept. of Chemistry, Gargi College

Technical Assistant  
Mr. Anuj Bharadwaj

**DEPARTMENT OF CHEMISTRY**  
Gargi College  
University of Delhi

Organises  
Webinar on the topic  
**OPEN EDUCATIONAL RESOURCES**

**Dr. Rohit Bhatia**  
Joint Advisor  
National Resource Center for Education  
National Institute of Educational Planning and Administration

Date: May 21<sup>st</sup>, 2020  
Time 11:00 AM  
Via Zoom

Please click here [Registration link](#)  
No registration fee  
E certificate will be provided  
After receiving feedback

Highlight: freely available educational Resources such as SWAYAM SWAYAM PRABHA, E-yantra etc

Patron-Dr. Promila Kumar (Principal)  
Conveners- Dr.Beena Negi and Dr.Manju K Saroj  
Organizing committee- Department of Chemistry  
Technical Assistance- Mr Anuj Bhardwaj



# Add-on Course (2018-19)



## Ayurveda and Yoga: The Science of Well Being *Organized by Department of Chemistry in Association with JIVA Ayurveda Faridabad*

- One year certificate course
- Comprised lectures & sessions on Yoga and Ayurveda
- Field visits to **Aravalli Biodiversity Park**, **Patanjali Herbal Garden (Haridwar)** and **JivaGram (Haryana)**. Two Former Principals also accompanied to the Patanjali trip
- **70 students** from different courses enrolled in this course



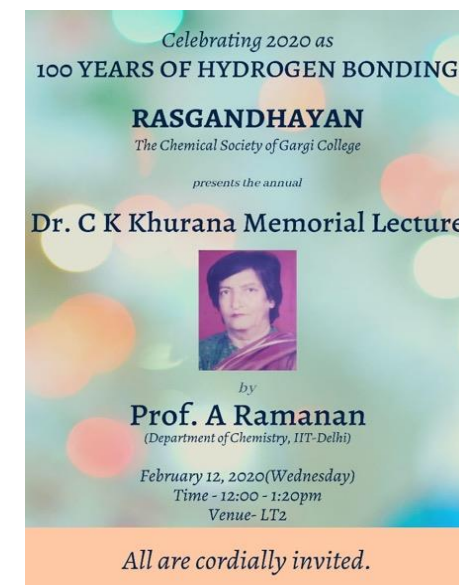
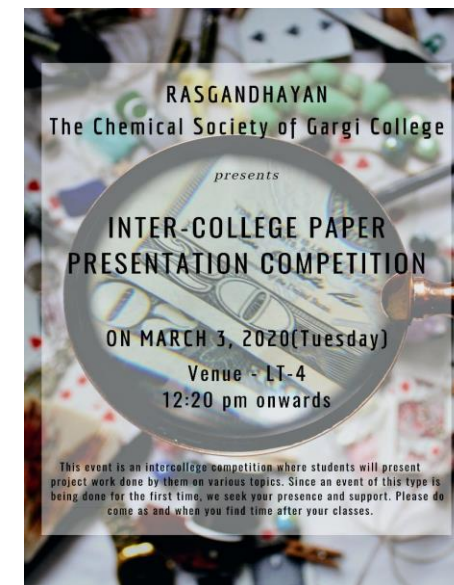
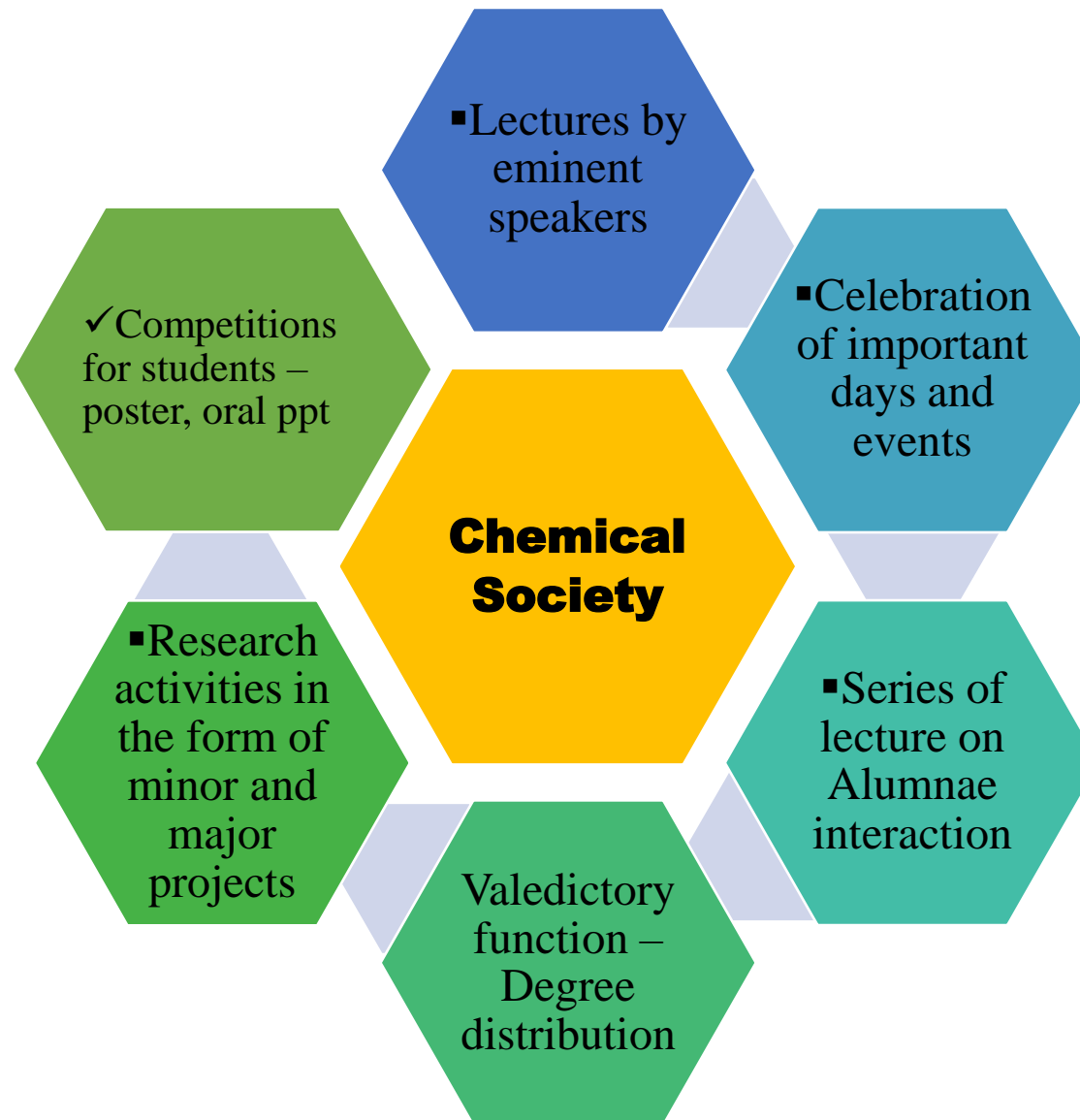
# **Beyond Curriculum – Activities for Students**

# Rasgandhayan

## The Chemical Society of Gargi College



Poster making competition on Ozone Day Celebration











*With Gargi Alumna Priya Jha of the Life Science 2015 batch at CFSL, Chandigarh*



*Principal Dr. Promila Kumar addressing the students at the Inter-College Competition*



*Students from various colleges presenting their projects*



*Curious Audience at Dr. C. K. Khurana Memorial Lecture*

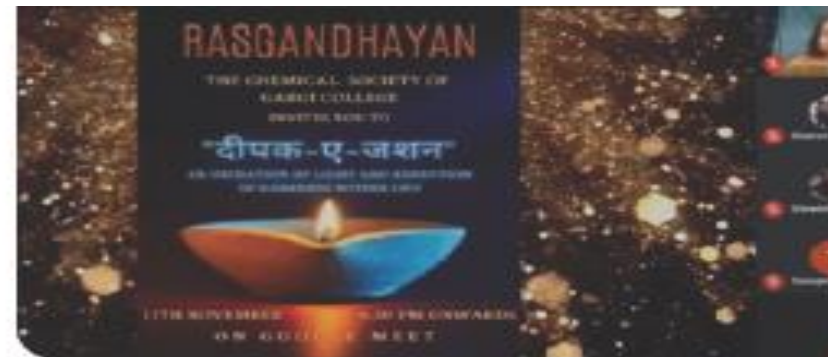
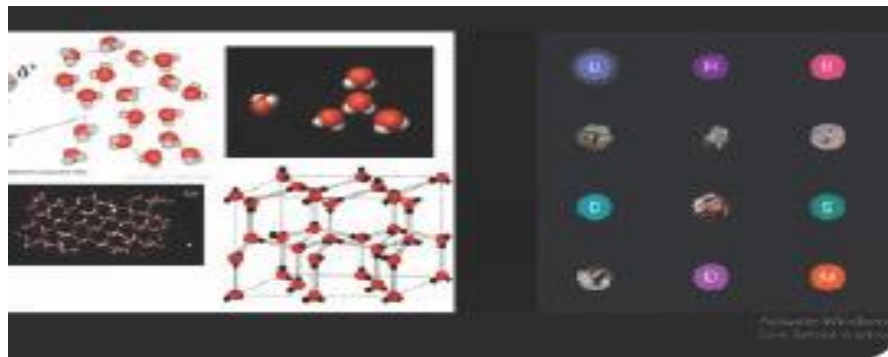


*Silver Medal for March Post in SPIN-2020*



*Enjoying Kasauli Continental Resort*

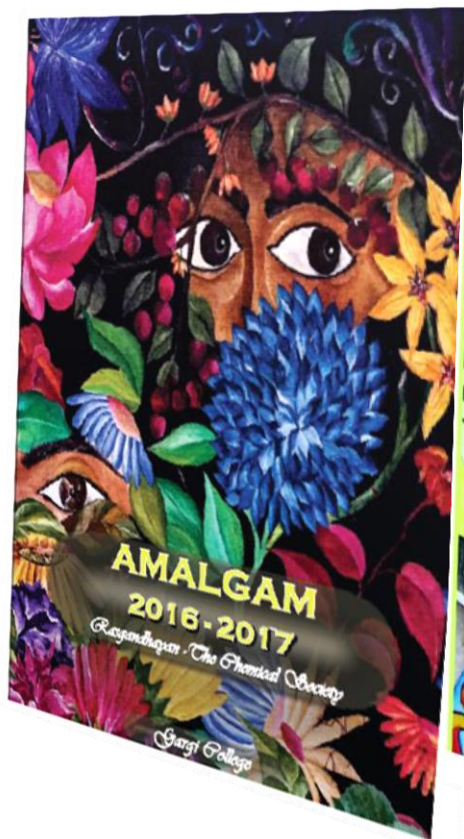
# Online Events in Covid Times





# Chemistry Department Annual Magazine "Amalgam"

- ✓ Content Created & Developed by Students
- ✓ Cover page also designed by students





# Educational Trips for Students



**Dhampur Sugarmill Asmauli, Uttar Pradesh (2016)**



**Yakult, Sonapat (2018)**



**UFLEX Packaging Company, Noida (2017)**



**Patanjali Herbal Garden, Haridwar (2019)**





**GSK Horlicks Unit, Sonapat (2019)**



**Glass Blowing Unit IIT Delhi, 2020**



**Central Forensic Lab, Chandigarh 2020**

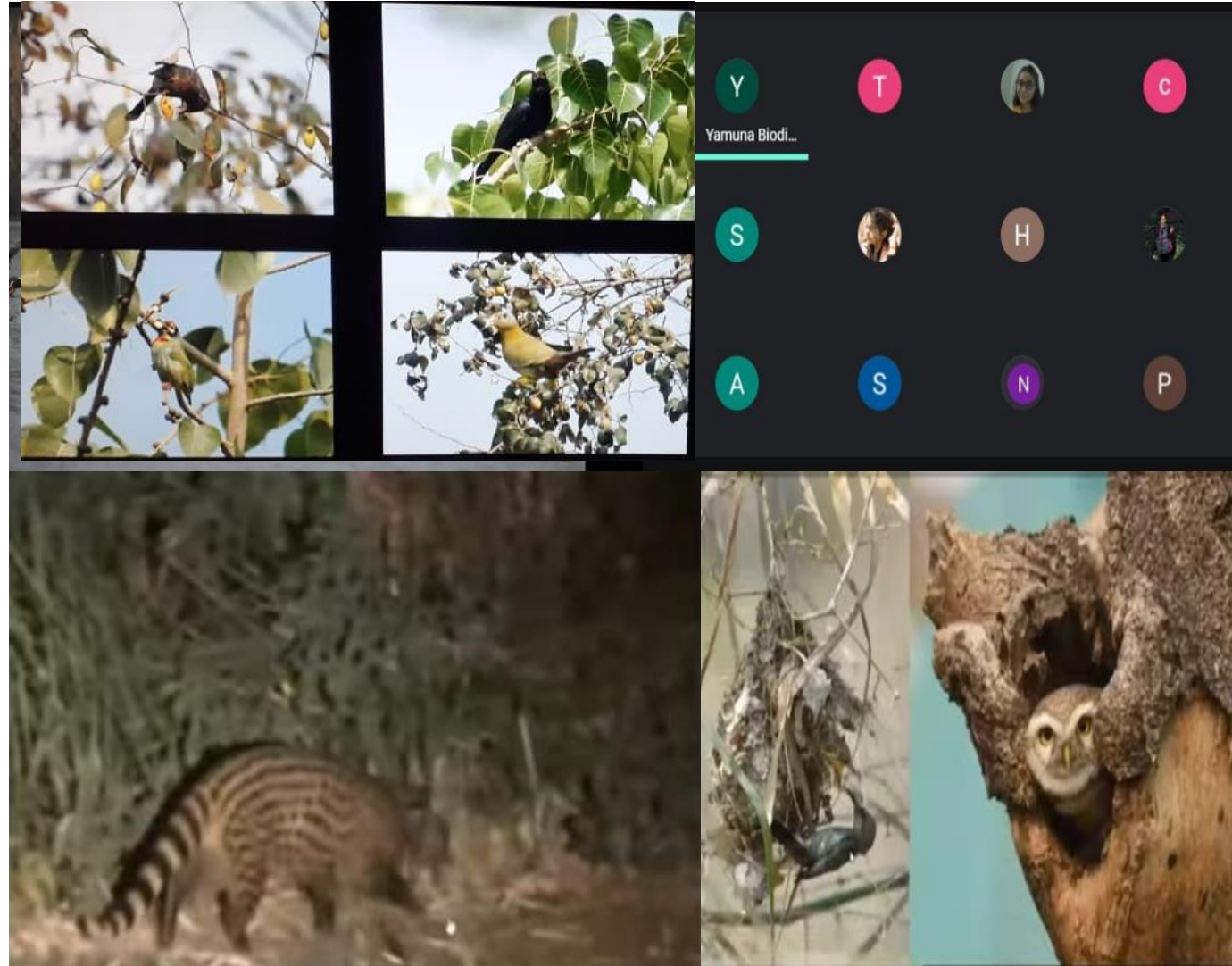


# Nature Walk

Aravalli Biodiversity Park (2019)



Virtual visit to Yamuna Biodiversity Park during Covid (2020)





# National and International Commemorative Days celebrated by the Department



“Best out of Waste” competition on  
**World Ozone day**



“Bookmark Making” competition on  
**World Biofuel Day**



“Rangoli Making” competition on  
**150<sup>th</sup> Birthday of Periodic Table**

Few more include:

- ✓ **Dr. C.K. Khurana Memorial Lecture on 100 years of Nobel on:**
  - Periodic table
  - Hydrogen bonding
  - Grignard reagent
- ✓ Tribute to Dr. Asima Chatterjee on her 100<sup>th</sup> birth anniversary
- ✓ National Science Day

# List of Eminent academicians and scientists/visitors to the Department

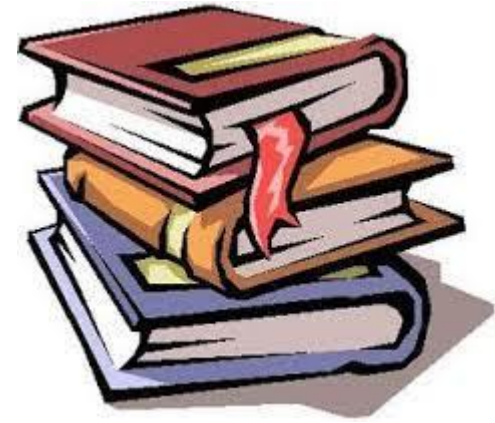
Speaker	ORGANISATION/INSTITUTION	Speaker	ORGANISATION/INSTITUTION
Dr. Rashi Mathur	Scientist “E”, INMAS, DRDO	Dr. Arvind	Director, Defence Hqrs Training Institute, Ministry of Defence
Prof. S. V. Eswaran	Emeritus Scientist-CSIR & Emeritus Professor-AcSIR Haryana	Dr. G.S. Tuteja	Dept of Mathematics, Zakir Husain College
Dr. Pratap Chauhan	JIVA Ayurveda, Faridabad	Dr. Shikha Nehru Sharma	Founder & Managing Director, Nutri-Health Systems Private Limited
Dr. Keshav Chauhan	JIVA Ayurveda, Faridabad	Prof. S. N. Singh	Advocate, Superme court of India
Padmashree Prof. S. Sivaram	Honorary Professor and INSA Senior Scientist IISER, Pune	Mr. Zubin Malhotra	Career Coach & Counsellor, CARING
Prof. Arunachalam Ramanan	Department of Chemistry, IIT Delhi	Prof. A K Susheela	Executive director of Fluorosis foundation of India and Former professor of AIIMS
Dr. Dinesh Mohan	Jawaharlal Nehru University, Delhi	Dr. Sasanka Deka	Dept of Chemistry, University of Delhi
Ms. Karishma Bist	FICCI, Delhi	Dr. Ram Mohan	Illinois Wesleyan University, USA
Dr. Preet K. Dhillon	Public Health Foundation of India	Professor Javed Iqbal	Founder and Chairman Cosmic Discoveries (Pharmaceutical Start Up), Hyderabad and formerly professor at IIT Kanpur
Dr. Chirashree Ghosh	Department of Environmental Sciences, University of Delhi	Dr. Mukesh Kumar	IIT Kanpur

# Four Pillars of Student Success and Progression

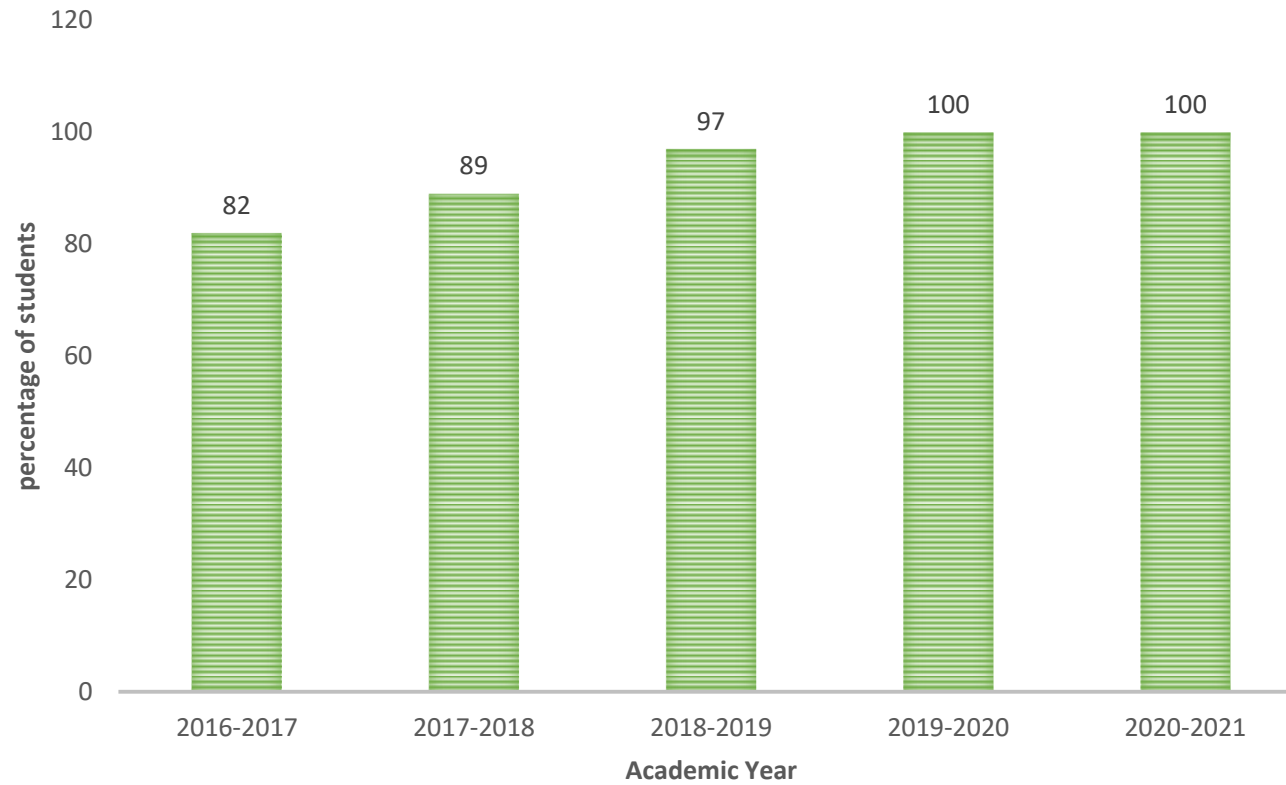




# ACADEMICS



## Result analysis indicating percentage of students with CGPA above 7



# University positions secured by our students in last 5 years

*B.Sc. (Hons.) Chemistry  
II Year*

*Secured the first position  
in college in the  
University Examination  
of 2019-2020  
and  
is the recipient of  
Gargi College Award  
for Excellence*

*Secured the  
Third Position in the  
University of Delhi and  
First Position in the  
University of Delhi  
South Campus*




Akshita Jain & Ramya Vishwanath secured **III position** in **DU** in 2020-21



*B.Sc. (Hons.) Chemistry  
I Year*

*Secured the first position  
in college in the  
University Examination  
of 2018-2019  
and  
is the recipient of  
Gargi College Award  
for Excellence*



*B.Sc. (Hons.) Chemistry  
III Year*

*Secured the first position  
in college in the  
University Examination  
of 2018-2019  
and  
is the recipient of  
Sh. Ravi Khullar  
Memorial Award  
and  
She secured the  
Second position in the  
University*




Vaishnavi Rana secured **II position** in **DU** in 2019-20

Muskan Rao secured **IV position** in **South Campus** in 2020-21

*B.Sc. (Hons.) Chemistry  
III Year*

*Secured the first position  
in college in the  
University Examination  
of 2019-2020  
and  
is the recipient of  
Sh. Ravi Khullar  
Memorial Award*

*Secured the  
Fourth Position in the  
University of Delhi  
South Campus*





# STUDENT ACADEMIC AWARDS

## Department Awards

- ✓ Dr. C.K. Khurana Memorial Award
- ✓ Dr. Minakshi Sharma Memorial Award
- ✓ Dr. C.K. Khurana Scholarship for financially weak students



Dr. C.K. Khurana

## College Awards

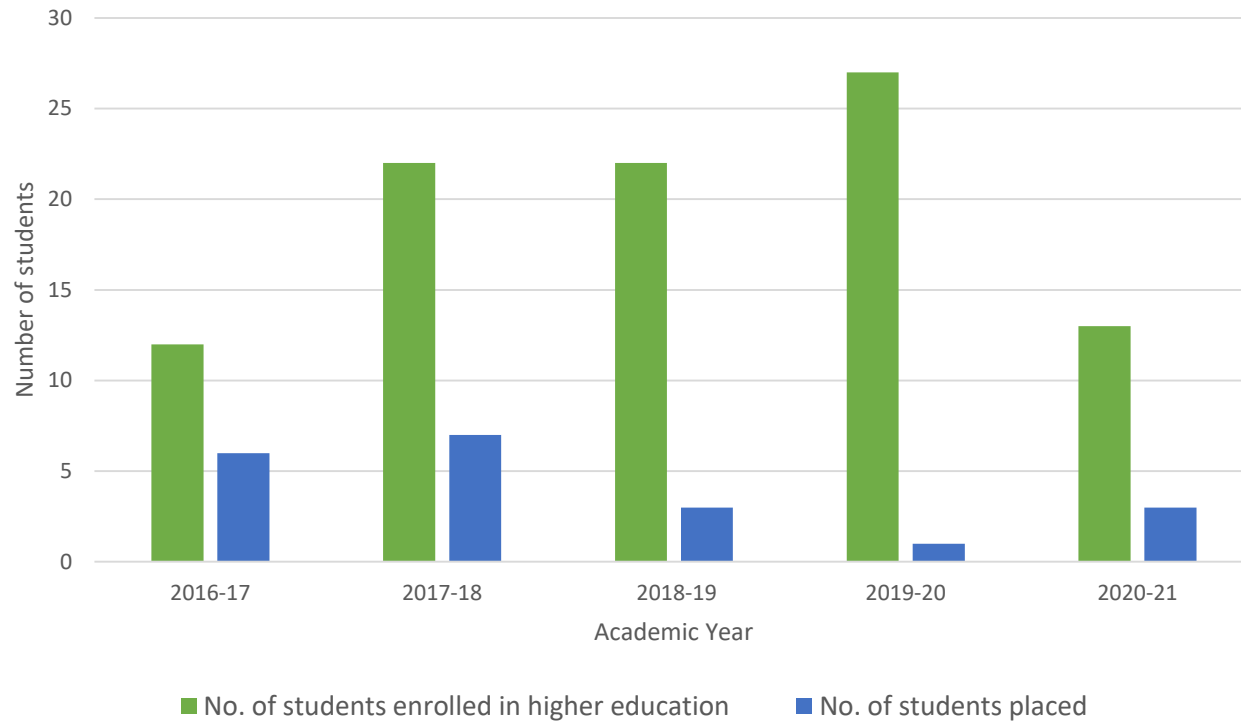
- ✓ Science Meritorious Award
- ✓ Shri Ravi Khullar Memorial Award
- ✓ Gargi Excellence Award



Dr. Minakshi Sharma



# Student Progression after Graduation – Last 5 years



# Student Progression after Graduation

<b>Higher Studies</b>	MSc./ Integrated MSc & PhD, PhD	<b>IISc, TIFR Hyderabad, JNCASR, IITs, NITs, IISERs, NPL</b>
<b>Higher Studies</b>	MSc, PhD	<b>University of Delhi, JNU, Banaras Hindu University, YMCA, Amity University, Jamia Millia Islamia, TERI</b>
<b>Higher Studies</b>	PhD from abroad after MSc	<b>USA, UK, Germany, Canada</b>
<b>Education &amp; Teaching</b>	B.Ed and M.Ed	<b>CIE, DU, Shyama Prasad Mukherjee College, Jamia Millia Islamia</b>
<b>Others</b>	Preparation for competitive exams	<b>UPSC, PCS, SSB, CDS, Police Services, Bank Services, MBA</b>
<b>Placement</b>	Self-employed, or otherwise	<b>Consultants at Deloitte, Kearney, WWF, School teaching, Byju's, Unacademy etc</b>

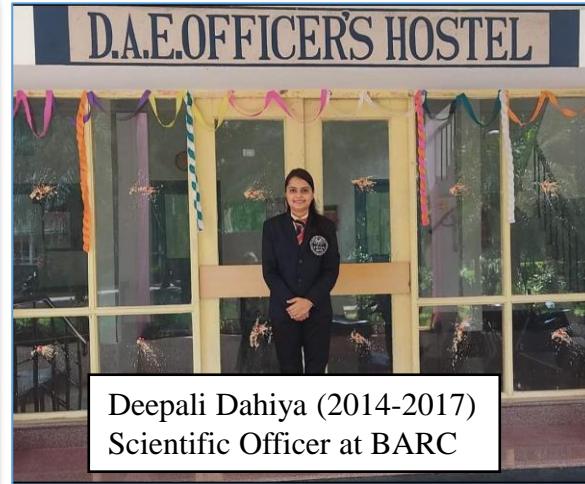


# Diverse achievements of our alumnae in the last 5 years

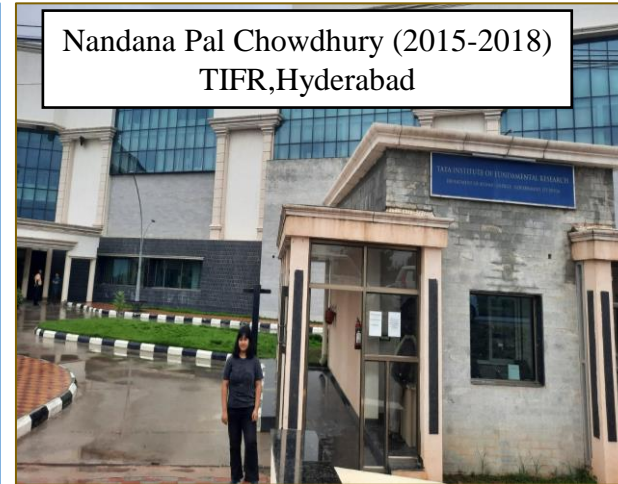
## Our Pride



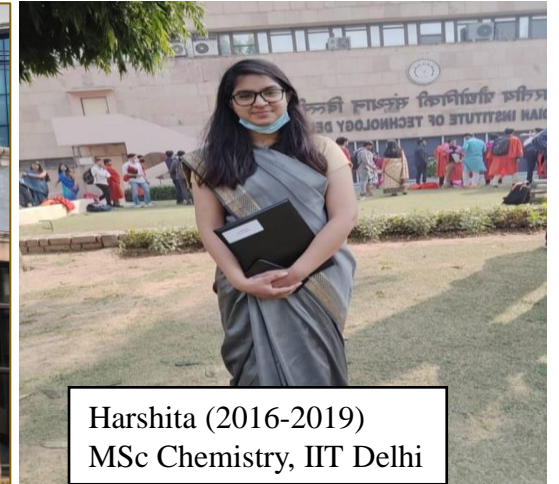
Anushka Mishra (2013-2016)  
Masters in Chemical Engineering  
Nagoya University, Japan



Deepali Dahiya (2014-2017)  
Scientific Officer at BARC



Nandana Pal Chowdhury (2015-2018)  
TIFR, Hyderabad



Harshita (2016-2019)  
MSc Chemistry, IIT Delhi



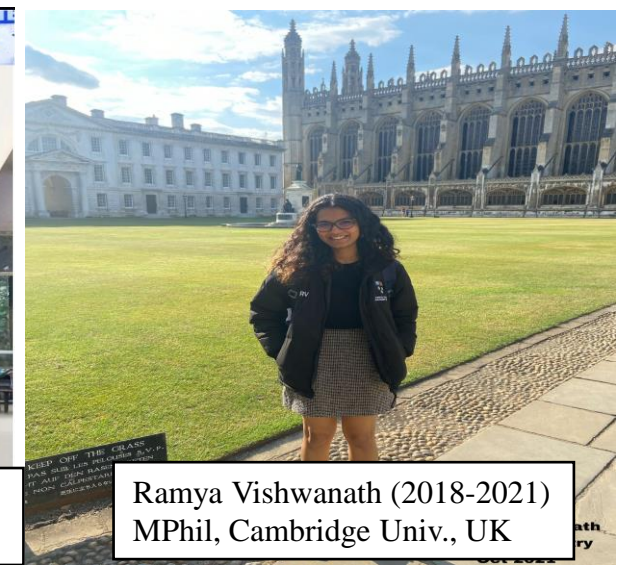
Shweta Menon (2013-2016)  
Master's in Public Policy - McGill University, Canada



Dorothy Sachdeva (2017-2020)  
Int PhD, IISc



Vidushi Gupta (2017-2020)  
MCA, NIT Kurukshetra



Ramya Vishwanath (2018-2021)  
MPhil, Cambridge Univ., UK



# Diverse achievements of our alumnae in the last 5 years

## Our Pride



Shweta Kalra (2013-2016)  
Pursuing PhD, Berlin, Germany



Sakshi Ghildiyal (2014-2017)  
Consultant at Kearney

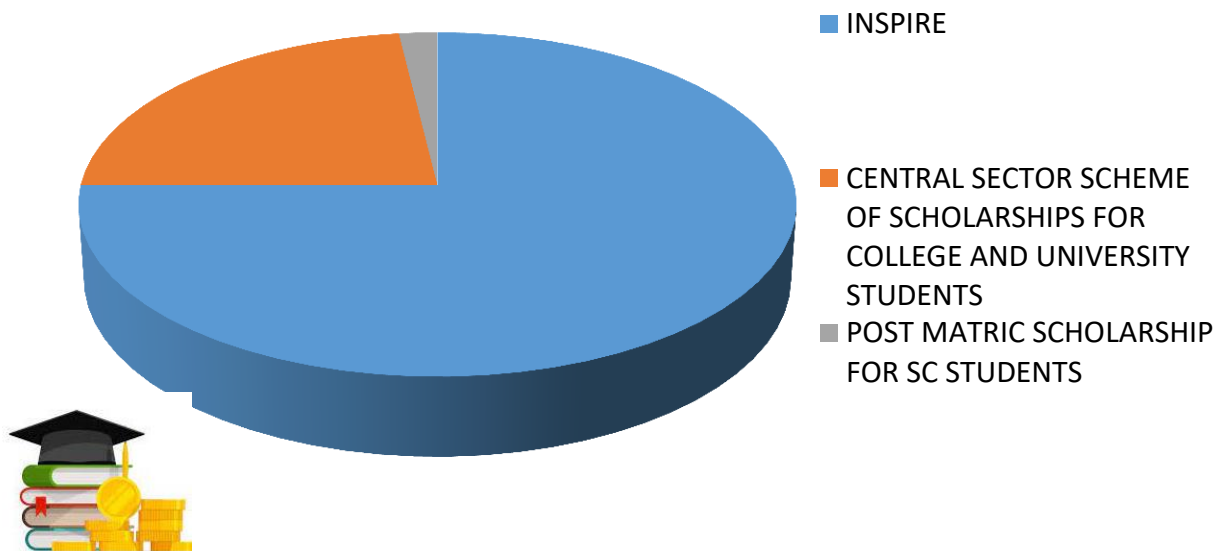


Kajal (2015-2018)  
Pursuing PhD, University of  
Colorado Boulder



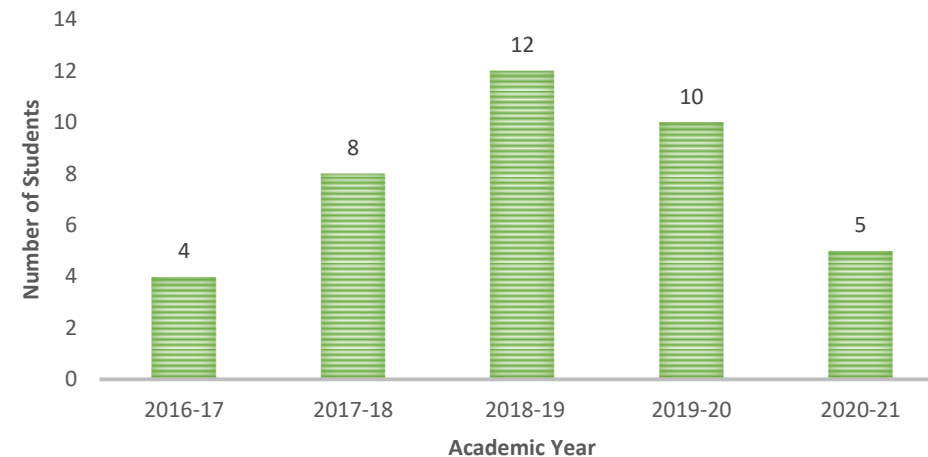
Priyanda Giri (2017-2020)  
Pursuing PhD, University of  
Pennsylvania

## Some Government Scholarships received by our students

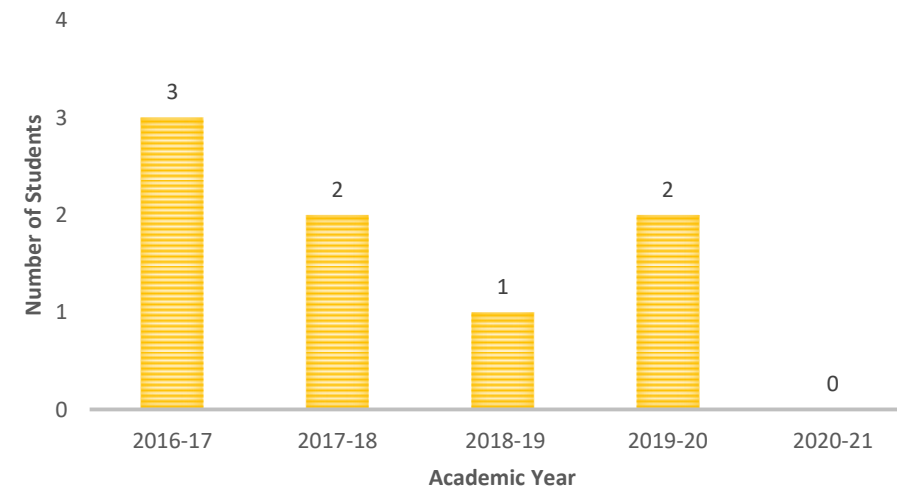


Ms. Priyanka of Chem (H) II Sem, has received prestigious ‘POSE’ (Promotion of Science education) scholarship by Haryana Govt.

## NO. OF STUDENTS QUALIFYING JAM



## NO. OF STUDENTS QUALIFYING GRE/TOFEL





# Our Prestigious Alumnae – A Few



Dr. Priyanka Bhattacharya  
Scientist, GVK Biosciences Ltd Hyderabad



Dr. Preeti Barnwal  
Scientific Officer, Chennai Forensic Dept



Dr. Neetika Rawat  
Scientist, BARC



Dr. Manjari Lal  
Sr. Scientific Officer  
Path Seattle, USA



Neha Ghai  
Major, Indian Army  
Recipient of prestigious Dr. Hema  
Raghavan Long Strider Award



Dr. Megha Karki  
PDF, The Scripps Research  
Institute USA



Dr. Nishma Ojha  
Scientific Officer, Dept of  
Atomic Energy



Dr. Geeta Gangal  
Principal Scientist,  
Novartis Boston, USA



Dr. Padma Akkapeddi  
Postdoctoral Researcher  
at NYU, New York.



Dr. Neha Thakur  
PDF, Harvard University, USA

# Students as Active Researchers



# Student Research Projects under the mentorship of Faculty- A Few

## 2016-2017

1. Green Synthesis of silver nano particles using different plant extracts- An attempt to synthesize triangular silver nanoparticles.

Student: **Komal MSc. Chemistry**, IIT Guwahati ; Teacher Mentor: Dr. Indu Tucker Sidhwani

2. Synthesis and characterization of Starch:PVA:Nano Ag based completely biodegradable polymeric blends-An alternative to conventional polymers

Students: **Gunjan and Witty Tyagi** ; Teacher Mentor: Geeta Saini

3. Walking the Road – From Sugarcane Waste to Benign Bioplastics

Students: **Anushka Mishra & Anupam** ; Teacher Mentor: Dr. Tripti Kumari      **PATHFINDER WINNER (SCIENCE)**

## 2017-2018

1. From Waste to Essentials- A Green extraction of Limonene Oil from Waste Fruits Peels and Studying its Larvicidal, Insect.

Student: **Nandana Pal Chowdhury**; Teacher Mentor: Dr. Tripti Kumari      **PATHFINDER WINNER (SCIENCE)**

2. Smart Fabric: Development of Nano Silver Coated Cotton Fabric.

Students: **Kajal , Prerna Yadav and Manisha Dagar** ; Teacher Mentor: Dr. Geeta Saini



## **2018-2019**

1. Title: From Waste to Essentials -Studying the Potential of Sawdust & Waste Tea Leaves for the Removal of Heavy Metal Ions: A Case Study of Contaminated Soil from the Yamuna River Basin.

**PATHFINDER WINNER (SCIENCE)**

Students: **Muskan Gill and Divya Saini** ; Teacher Mentor: Dr. Tripti Kumari

2. Title: Effect of chemicals on stone monuments and ways to prevent the corrosion of monuments.

Students: **Priyanda Giri, Dorothy Sachdeva and Shilpi Lamba**

Teacher Mentor: Dr. Chandana Mukherjee and Dr. Himani Chauhan

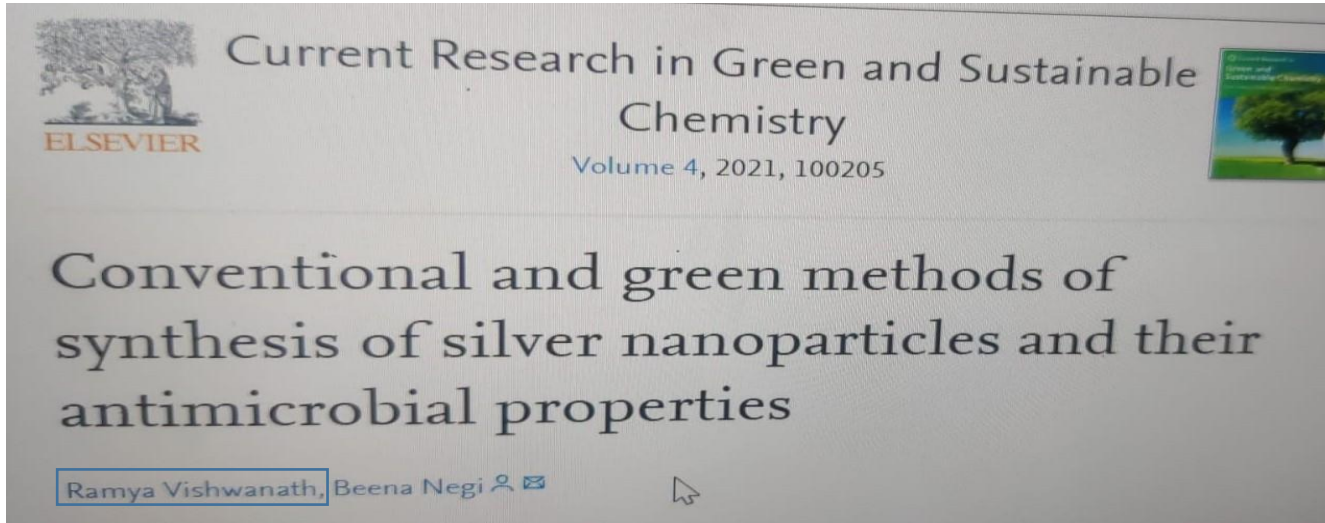
**PATHFINDER WINNER (SCIENCE)**

## **2019-2020**

Colorimetric analysis of the kinetics between ferric nitrate and sodium thiosulphate.

Student: **Ramya Vishwanath** \; Guided by: Dr. Keya Banerjee and Dr. B. Vijayanthi

# Student Research Publications



Journal of  
Materials NanoScience

## Synthesis and Biodegradation Study of Starch/PVA/Nanoclay Blend

Geeta Saini,<sup>1\*</sup> Himani Chauhan,<sup>1</sup> Aeshna Gupta,<sup>2#</sup> Disha Gangotia<sup>2#</sup>



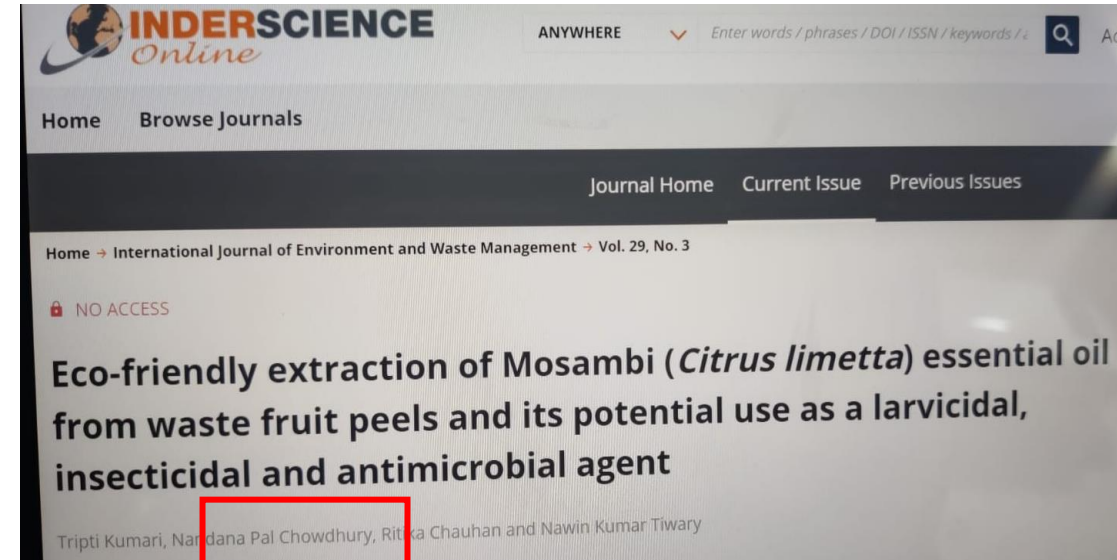
Journal of  
Materials NanoScience

## Preparation of NanoSilver coated Cotton Fabric and its bactericidal evaluation

Geeta Saini,<sup>1</sup> Kajal,<sup>2</sup> M. Divya Ganeswari<sup>3</sup>

<sup>1</sup>Department of Chemistry, <sup>3</sup>Department of Zoology, Gargi College, University of Delhi, India. <sup>2</sup>Department of Chemistry, University of Delhi, India

Submitted on: 23-Dec-2018 Accepted and Published on: 20-Feb-2019



Applied Water Science (2021) 11:68  
<https://doi.org/10.1007/s13201-021-01406-4>

ORIGINAL ARTICLE

## The purification of wastewater on a small scale by using plants and sand filter

Geeta Saini<sup>1</sup> Shweta Kalra<sup>2</sup> · Urminder Kaur<sup>3</sup>

## Faculty-Student Project Presentation at Conferences – a few

- Sushmita Chowdhury, **Parul Sharma**, **Henadri** and Indu Tucker Sidhwani received best poster award at international conference on “Advancing Green Chemistry, Building a sustainable tomorrow’ jointly organized by Green Chemistry Network Centre, DU & Hindu College on 3-4 Oct, 2017.
- **Aeshna Gupta**, **Disha** and Geeta Saini presented paper entitled “Development of starch and nano clay based bio degradable polymer blends for food packaging applicatins in Lab 2 Life organized by Dept of Biochemistry, Sri Venkateswara College on Feb, 15-16, 2018.
- **Kajal** and Geeta Saini presented a poster on “Smart Fabric Development of nano silver coated cotton fabric” organized by Dept of Chemistry, St. Stephen’s College on March 19-20, 2018.
- **Henadri Debbarma**, **Parul Sharma**, Sushmita Chowdhury and Indu Tucker Sidhwani presented poster on “Green Biginelli Reaction using renewable source of energy” at national conference on recent advances in chemical sciences toward a green and sustainable environment, DU on October 10-11, 2017.
- **Rishika Sharma**, **Sara Dua**, **Kavita Sharma** and Neha Sharma, oral presentation in workshop on “Greening an undergraduate chemistry lab” held on August 8-9, 2018 at Sri Venkateswara College



## Faculty-Student Project Presentation at Conferences (contd.)

- **Rishika Sharma, Sara Dua, Kavita Sharma** and Neha Sharma won second prize in poster presentation held in the conference on “Emerging Trends and Advances in Chemical Sciences” in St. Stephens College on 25-26 Sept, 2018.
- **Shrushti Rout and Shreya Shmabhavi** of B.Sc (H) Botany, Semester VI worked under the guidance of Dr. Geeta Mehta and Dr. Taruna Singh won Second Prize in Poster Presentation on the topic entitled “Biofuel Production from Algal Bloom” in Online International Conference on “Rethinking Science for Sustainable Development” organized by Department of Chemistry, Rajdhani College, University of Delhi on April 20-21, 2021 (RSSD-2021).
- **Anushka Mishra, Anupam** and Tripti Kumari, Oral Presentation on “Walking the Road – From Sugarcane Bagasse to Benign Bioplastics” in the National Conference on “Environmental Concerns of the 21<sup>st</sup> century” in Zakir Hussain Delhi College on 21-22 March 2016.

# Students Receiving Awards for their research work



**Best Poster Award in International Conference, 2017**



**Gargi College Pathfinder Award, 2016 & 2019**



**II Prize in Poster Presentation in National Conference, 2018**



**Best Poster Award in National Conference, 2016**

# **Sports & Extra Curricular Achievement**





## Sports Day March Past - Chemistry Department got II position 2017, III position in 2018 & II position in 2020



## Doing us Proud - Nisha Jakhmola, Chemistry (H) 2019-2022



Senior State Volley Ball Championship



I position in BITS Pilani tournament





NCC Cadet Komal Rohilla being awarded for participation in Chief Minister Independence Day Parade



**Himani Saini Batch 2016-2019**  
Got **alpha grade** in **B-Certification Examination** held in 2018 under Ministry of Defence, Govt of India



Rolling Trophy “**Best Department**” received by the Department of Chemistry for bagging the maximum number of prizes in all events in the Inter-Science Department College Fest Scintillations 2019

# Students' Participation in Social Work

- ❑ NGO Served
- ✓ Gyandeeep Foundation
- ✓ Vishalakshi foundation
- ✓ Spirit of Youth Foundation
- ✓ Advance Healthcare Foundation





# **Best Practices of the Department**

# Best Practices of the Department

01

## Students Research

- Guided for research projects done under Star College and Path finder award
- Summer Projects
- Research papers with students & faculty as authors are published
- Encouraged for oral and poster presentations in conferences

02

## Sensitivity towards Environment

- Adopt Green Practices in lab
- Microscale usage of chemicals
- Waste Management
- Following Safety practices in lab

03

## Mentoring, Feedback, Transparent Assessments

- Students mentoring done time and again on various academic, career and personal issues
- Teachers request students to fill feedback forms to get honest review for teaching pedagogy and any other suggestions

04

## Alumnae Interactions

Regular interactions with alumnae are organized to benefit the current students from the experiences of their seniors

05

## Degree distribution

Only Department to hold a Degree Distribution Ceremony every year for passed out students of BSc (H) Chemistry



Use of Material Safety data sheets (MSDS) is encouraged

Usage of toxic chemicals avoided

Organise workshops & lectures to sensitize labstaff & students for waste management techniques

Use Green chemistry Principles to prevent the generation of waste at the source.

Semi micro kit

## Waste Management

Spot test

Minimum quantity



Organic solvents, like alcohol, chloroform, acetone are distilled and reused

Product of one experiment is starting material of the next experiment

Wherever possible organic solvents are distilled and reused

. Paper and Glass waste, wherever possible, is sent for recycling



# Safety Practices



## To make the labs green and accident averse....

- ✓ There is *maximum natural light* and *good ventilation*.
- ✓ *Exhaust fans* have been installed so that all gases generated are evacuated fast.
- ✓ *Fire extinguishers* have been provided
- ✓ *Fume hood chambers*
- ✓ *First Aid Kit* is readily available
- ✓ Gloves and Masks for safe handling of chemicals
- ✓ For any emergency, we have a full-time nurse and a doctor available in the medical room





Conduct  
Mentoring/Counselling  
for students –both  
Academic & Personal

Social Issues

PG issues

Physical & Mental Well-being

Communication Problems

Academics & Career

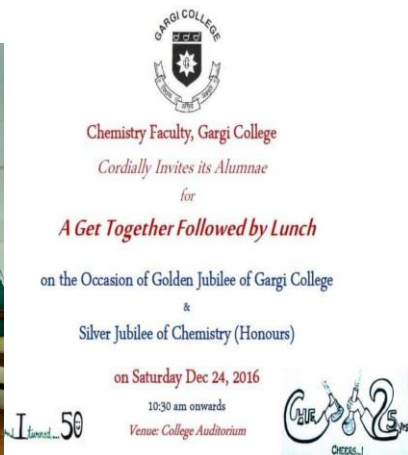
Financial aid to some needy students



# Alumni Interaction



- ✓ Department Alumni Meet are organized
- ✓ Alumni are invited to deliver lectures





- ✓ We have a Chemistry Alumnae Facebook page to stay connected with alumni



## Chemistry Alumnae Gargi College >

Private group · 485 members



Manage

Invite

You Topics Photos Events Files

- ✓ Three of the alumnae are faculty in the Department



Dr. Manju Saroj  
Batch of 2005



Dr. Beena Negi  
Batch of 2005



Dr. Neha Sharma  
Batch of 2007

# Alumnae Feedback



## Vaishnavi

Chemistry (H) 2016-2019

- Teachers always cleared smallest of doubts and guide with warmth and understanding
- Learning in lab proved to be beneficial later on
- Department always encouraged in academics, research and extra curriculars

## Muskan Rao

Chemistry (H) 2017-2020

- Chemistry department had made me more hardworking, disciplined and deterministic
- Learnt a lot from seminars/workshops and other ECAs organized by Rasgandhayan
- Environment of Chemistry Lab was very conducive, teachers made procedure very simple, took care of safety
- Learnt many lessons from teachers. To sum up – **If you get tired, Learn to rest, not to quit**

## Ramya

Chemistry (H) 2018-2021

- Department of Chemistry taught me more than academics
- My three years transformed me from shy to self confident person
- Built sound foundation of subject and correlate different concepts and skills





Only Department to hold  
a Degree Distribution  
Ceremony every year for  
passed out students



Batch of 2016: Degree distribution Ceremony held in 2018



Batch of 2017: Degree distribution Ceremony held in 2019



# SWOC

## Strengths

- Highly Qualified and dedicated faculty members
- Department is a blend of both experienced and young faculty members
- Students are motivated to think beyond curriculum
- Diverse teaching methods

## Weakness

In Covid pandemic, we realised we were not well prepared to switch to completely online teaching methods, especially with regards to the practical component.

## Opportunity

- Development of E-content and development of innovative ways of teaching during pandemic

## Challenges

- Development of Virtual Labs
- More Environment Friendly approach required in lab
- Inculcate scientific outlook in students
- Students are from diverse backgrounds; communication skill is a problem

SWOC

Strengths

Weaknesses

Opportunities

Challenges

# Way Forward

1. Need of an **equipped chemistry research lab for faculty members**
2. **Extension of chemistry beyond the curriculum**
  - More opportunities for collaboration to be explored



