



# चौधरी महादेव प्रसाद महाविद्यालय C. M. P. DEGREE COLLEGE

(A Constituent P.G. College, University of Allahabad)

Under the Strengthening Component of DBT Star College Scheme

Website: [www.cmpcollege.ac.in](http://www.cmpcollege.ac.in)



2018



MEMORANDUM OF UNDERSTANDING

BETWEEN

CHAUDHARY MAHADEO PRASAD DEGREE COLLEGE, PRAYAGRAJ  
INDIA

&

VIJNANA PARISHAD PRAYAG, PRAYAGRAJ, INDIA

ON

PARTNERSHIP FOR JOINT CAPACITY BUILDING, KNOWLEDGE EXCHANGE  
PROGRAM AND INTER-INSTITUTIONAL ACTIVITIES



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## Authorized Signatories

Each party/ institution represents that the individuals signing this memorandum of understanding have the authority to sign on its behalf in the capacity indicated.

IN WITNESS whereof the undersigned, being duly authorized thereto, have on behalf of the parties hereto signed the present Memorandum of Understanding at the place and on the day stipulated below

Vijnana Parishad, Prayagraj

Chudhary Mahadeo Prasad Degree College

Signature: Shiv Gopal Mishra

Signature: Brijesh Kumar

Name: Prof. Shiv Gopal Mishra

Name: Dr. Brijesh Kumar

Title: Pradhyaanmantri

Title: Principal

Date: 10.10.2018

Date: 10/10/2018



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## REPORT: Three Days National Seminar on

### “Innovative Frontiers in Applied Sciences”

The National Seminar on “Innovative Frontiers in Applied Sciences” was organized on September 26-28, 2019 by the Chemical Society, Department of Chemistry, CMP Degree College, Prayagraj-211002(India) in collaboration with Vigyan Parishad, Prayag , Prayagraj-211002(India).

#### First day, 26 September, 2019.

On the first day the inaugural session was organized in the auditorium of Vigyan Parishad. On this occasion departmental bulletin of Chemistry Department "Chem-World" Vol III and IV was released and the book authored by Dr. Deepa Srivastava was also released by the dignitaries present in the function. The chief guest Dr. Shiv Gopal Mishra emphasized on the need of innovation in research and he appealed to use our national language Hindi more in the science related work. Guest of honor Prof. Jagdamba Singh said that all the knowledge is incomplete without chemistry. He also said that use of green solvent and green chemistry is very useful for the environment.

Dr. Abhishek Srivastava welcome the guests, Dr. Archana Pandey gave a brief description of chemical society. Subject initiation was done by Dr. Deepa Srivastava. The chair person Dr. Brijesh Srivastava, Principal CMP Degree College, emphasized on research which is deeply rooted with the benefit of general public. He said that all of us should take care to protect and safe the environment and conserve water. Prof. Shiv Gopal Mishra and Prof. Jagdamba Singh were awarded with ‘Award of Excellence’ for their valuable contribution in the field of science, by chemical society. Anchoring was done by Dr. Babita Agarwal and thanks was given by Dr. Sunanda Das. On the inaugural function along with Dr. Roli Srivastava, Dr. Arti Gupta, Dr. A.K.Shukla, Dr. Mridula Tripathi, Dr. Santosh Srivastava, Dr. Monika Singh, Dr. Deepanjali Pandey, Dr Akram Ali, Dr. Vishal Srivastava, Dr Archita Srivastava, Dr. Praveen Singh, Dr. Praveen Tripathi, Dr. Pramod Sharma, Dr. D.K. Sahu, Dr. Himani Chaurasia, a large number of Professors from different college and university of Uttar Pradesh and the students were present.

#### Second day, 27 September, 2019

On the second day of the seminar , two technical sessions were organized.

**In the first technical session** the invited talk was given by **Prof . Satish Awasthi , Professor, Chemistry Department, Delhi University**. He gave a detail description of his research work on anti malarial drug. He told about extracting antimicinim from plant, which is very useful in preventing malaria infection.



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In the second technical session, the Emeritus Scientist, **Prof Krishna Mishra, IIT Allahabad** presented the invited Talk on 'Contribution of technology in the development', she said that the serious problem like illiteracy, agriculture and health can be tackled easily with the help of technology only. She said that interdisciplinary education should be encourage for the better development. She was honored with 'Award of Excellence' for her great contribution in the field of science.

The third invitation lecture was given by **Prof. K.K Upadhyaya, Professor, Chemistry Department, BHU** on nano-particles. He told about the use of nano-particles in various fields and its future prospects.

In both the technical sessions, the lecture given by the guests was followed by the oral presentation of the faculty members and students. Some students gave the poster presentation also. First technical session was conducted by Dr. Santosh Srivastava and the second technical session was conducted by Dr. Babita Agarwal. Vote of thanks was given by Dr. Himani Chaurasia. About 25 poster presentation and 60 oral presentations from all over India were presented on the second day. The presence of all the faculty members and the non-teaching staff of Department of Chemistry and large number of professors from different institutions and students graced the function.

### Third day, 28 September, 2019.

Valedictory function was chaired by Ch. Jitendra Nath Singh, President of K.P. Trust. The chief guest, **Prof. K.B. Pandey, Ex VC Kanpur University and Chitrakoot Gramodaya Vishwavidyalaya** gave a detailed knowledge on medicinal plants. He said that a single plant can have a lot of medicinal value and more research in this field is needed. He emphasized on such research which is beneficial to the common man, especially those living in the villages. He told that 150 phytochemicals are present in Neem tree only, which has the antibiotic, antiviral, antioxidant, antifungal, analgesic properties. The chair person Ch. Jitendra Nath Singh told about the seriousness of global warming and steps to be taken to reduce it. The function was graced with the blessings given by Prof. Krishna Srivastava, convener, Department of Chemistry, A.U. and Dr. Brijesh Srivastava, Principal, CMP Degree College. The founder of Chemical Society, Dr. Ashok Ranjan Saxena told about the objectives of the chemical society and said that whatever we do in laboratory should be made reachable to common man. The release of the book 'Tan aur Man ka Rasayan' authored by Dr. Archana Panday of Department of Chemistry, CMP Degree College was done by the dignitaries on the dais. The report of the three day seminar was presented by the secretary of the seminar Dr. Abhishek Srivastava. The function was conducted by Dr. Arti Gupta and vote of thanks was given by Dr. Deepa Srivastava. The volunteers from M.Sc and the non-teaching staff were honored for their contribution in the seminar. All the



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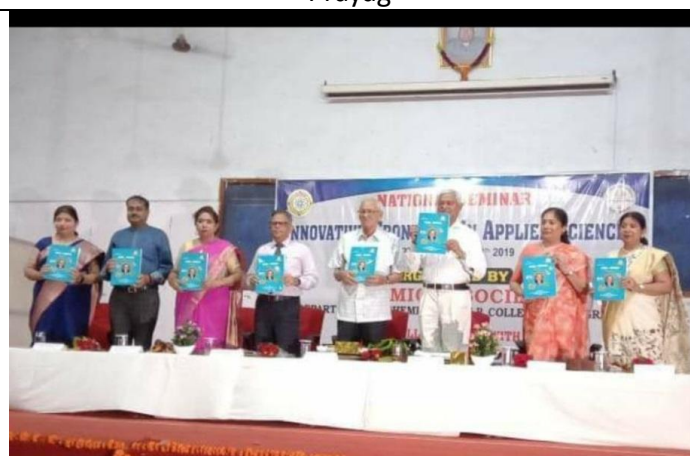
faculty members, non-teaching staff and students of CMP College along with large number of professors and students from other institutions were present in the function.



Inaugural session of **Three days National Seminar on "Innovative Frontiers in Applied Sciences"** was conducted by Chemical Society, Department of Chemistry in collaboration with Vigyan Parishad Prayag from 26<sup>th</sup>-28<sup>th</sup> September 2019, at Vigyan Parishad Prayag



Release of Seminar Abstract Book



Release of Chemistry Department's annual bulletin "Chem-World" Vol IV & V (Publication 2017-19)



Release of "Inorganic Chemistry" book authored by Dr. Deepa Srivastava



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Felicitation of Prof. Jagdamba Singh with "Award for Excellence" by Chemical Society, Department of Chemistry.



Felicitation of Prof. Shiv Gopal with "Award for Excellence" by Chemical Society, Department of Chemistry.



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Ch. Jitendra Nath Singh delivering his address in the seminar.



Valedictory session of National Seminar on "Innovative Frontiers in Applied Sciences"





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### REGISTRATION FORM

#### NATIONAL SEMINAR

#### Innovative Frontiers in Applied Sciences

September 26-28, 2019

Organized by  
Chemical Society, Department of Chemistry  
C.M.P. College  
(A constituent P.G. College of Allahabad University)  
Prayagraj - 211 002 (INDIA)  
In collaboration with  
Vijnana Parishad Prayag  
(Local Chapter) Prayagraj - 211 002 (INDIA)

Name : .....  
Designation : .....  
Affiliation : .....  
Address : .....  
E-mail : .....  
Telephone : .....  
Presentation : Oral ..... Poster .....

Please complete this registration form and mail a scanned copy to [ifaschm2019@gmail.com](mailto:ifaschm2019@gmail.com) or send a hard copy before August 30, 2019 to

Chemical Society  
Department of Chemistry  
C.M.P. College, Prayagraj-211002 (INDIA)  
Date: ..... Signature .....

(Photocopy of the Form may also be used)

### HOW TO REACH PRAYAGRAJ

Prayagraj is accessible by air and train from all parts of the country. There is a network of bus services from all the Northern States. The Venue is about 6 Km from Prayagraj Junction and 10 Km from Prayagraj Airport.

### DEPARTMENT OF CHEMISTRY

Department of Chemistry is biggest department among all departments of C.M.P. College. This department has 22 teaching and 9 non-teaching staff. The research areas in which work is being pursued are in the field of Synthetic Organic Chemistry, Polymeric Materials, Solar Cell, Coordination Chemistry, Materials Chemistry, Supramolecular Chemistry and Medicinal Chemistry. Faculty members of the Department have undertaken projects worth Rs. 1.1 Crore from various funding agencies like UGC, DST, CSIR, etc.

### ABOUT VIJNANA PARISHAD PRAYAG

Vijnana Parishad was established in 1913. It is working in the field of science popularization and dissemination in Hindi and other Indian Languages.

### NATIONAL ADVISORY COMMITTEE

- Prof. Jagdamba Singh (AU, Prayagraj, UP)
- Prof. Satish Awasthi (DU, Delhi)
- Prof. K.K. Upadhyaya (BHU, Varanasi, UP)
- Prof. Surya Prakash Singh (IIT, Hyderabad, Telangana)
- Prof. Anand Prakash Mishra (H.S. Gaur University, Sagat, MP)
- Dr. Sheila Srivastava (Firoz Gandhi PG College, Raibareilly, UP)
- Prof. Janhavi Singh (UP College, Varanasi, UP)
- Dr. Hemlata Pant (CMP College, Prayagraj, UP)
- Mr. Deenrat Divedi (Executive Secretary, Vijnana Parishad Prayag, UP)

### NATIONAL SEMINAR

#### Innovative Frontiers in Applied Sciences

September 26-28, 2019



Organized by  
Chemical Society  
Department of Chemistry  
C.M.P. College  
(A constituent P.G. College of Allahabad University)  
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In collaboration with  
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(Local Chapter)  
Maharshi Dayanand Marg  
Prayagraj - 211 002 (INDIA)

### THE THEME OF SEMINAR

Applied science is a point of intersection between research & development and its actual application in the real world. All the frontiers in innovations play an instrumental role in advancement of applied research areas. The seminar seeks to explore the essential gist of such innovations, their possible applications in various fields, foster the creative and applicative thinking of researchers and stimulate more of such initiatives. It is desired that the academic discourse in the present seminar will bring positive results and insight for the near future.

#### Thrust Area of the Seminar:

- Polymers in Applied Sciences
- Save the Planet Earth
- Renewable Energy
- Natural Product and Drug Discovery
- Material Science for Mankind
- Fuel for Future
- Molecular Biology
- Waste Management
- Tissue Culture and Genetically Modified Crops
- Water Conservation

#### Call for Abstracts

Submission of abstract (not exceeding 500 words) for invited talk and (250 words) for Oral/Poster presentation should be submitted to the address for correspondence latest by August 30, 2019.

Font Style: Times New Roman, MS Word format.  
Font Size: 12 (For Text, Author's name, Affiliation & E-mail ID).  
Font Size: 14 (For Title)  
Line Spacing: 1.5, leaving 1-inch margin on all sides on A-4 page.

### ORGANIZING COMMITTEE

- Chief Patron** : Ch. Jitendra Nath Singh  
(President, K.P. Trust, Prayagraj)
- Patron** : Dr. Brjesh Kumar  
(Principal, CMP College, Prayagraj)
- Chairperson** : Prof. Shiv Gopal Mishra  
(Pradhan Mantri, Vijnana Parishad Prayag Prayagraj)
- Co-chairperson** : Dr. Archanda Pandey  
Dr. Sunanda Das
- Convener** : Dr. Deepa Srivastava
- Co-Convener** : Dr. Anil Kr. Shukla  
Dr. Roli Srivastava  
Dr. Babita Agrawal  
Dr. Santosh K. Srivastava  
Dr. Arti Gupta  
Dr. Meridula Tripathi
- Organizing Secretary** : Dr. Abhishek Srivastava
- Co-Organizing Secretary** : Dr. Praveen Tripathi  
Dr. Pravin Kr. Singh  
Dr. Vishal Srivastava  
Dr. Ashok Kr. Ranjan  
Dr. Ranjeet Kumar
- General Secretary** : Dr. Akram Ali
- Joint Secretary** : Dr. Dharmendra Kr. Sabu  
Dr. Monika Singh  
Dr. Pramod Kumar  
Dr. Deepanjali Pandey  
Ms. Himani Chaurasia
- Treasurer** : Dr. Arjita Srivastava

### IMPORTANT DATES

**Deadline**  
For Abstract Submission August 30, 2019  
For Registration August 30, 2019  
Date of Seminar September 26-28th, 2019

**Registration Fee**  
Academicians Rs. 1200/-  
Research Scholars Rs. 1000/-  
Others Rs. 800/-

**Note:**  
On the spot registration fee will be extra Rs. 200/- with above mentioned registration fee.

#### ADDRESS FOR CORRESPONDENCE

**Convener:**  
Mobile : 09452797906, 9815367142, 8004411230  
Abstract can be submitted to Email ID :  
[ifaschm2019@gmail.com](mailto:ifaschm2019@gmail.com)

**Registration fees can be submitted online**  
SYNDICATE BANK PRAYAGRAJ  
(Branch - Prayag)  
A/C No. 86162010035053  
IFSC: SYN80008616

#### VENUE

**Auditorium**  
Vijnana Parishad Prayag  
(Vijyan Parishad Prayag)  
Prayagraj-211 002 (INDIA)



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## पर्यावरण की दृष्टि से ग्रीन केमिस्ट्री बहुपयोगी

जासं, प्रयागराज : सीएमपी डिग्री कॉलेज के रसायन विज्ञान विभाग की केमिकल सोसायटी एवं विज्ञान परिषद के संयुक्त तत्वावधान में गुरुवार को इनोवेटिव फ्रंटियर्स इन एप्लाइड साइंसेज विषयक तीन दिवसीय राष्ट्रीय संगोष्ठी का उद्घाटन विज्ञान परिषद के सभागार में हुआ। केमिकल सोसायटी द्वारा प्रकाशित डॉ. दीपा श्रीवास्तव की पुस्तक का विमोचन भी हुआ।

मुख्य अतिथि डॉ. शिव गोपाल मिश्र ने कहा कि शोध में नवाचार वक्त की जरूरत है। विज्ञान में हिंदी का उपयोग अधिक करने की अपील की। विशिष्ट अतिथि प्रो. जगदंबा सिंह ने कहा कि ग्रीन केमिस्ट्री पर्यावरण की दृष्टि से बहुत ही उपयोगी है। स्वागत उद्बोधन डॉ. अभिषेक श्रीवास्तव, डॉ. अर्चना पांडेय ने केमिकल सोसायटी का संक्षिप्त परिचय व विषय प्रवर्तन डॉ. दीपा श्रीवास्तव ने किया। अध्यक्षता प्राचार्य डॉ. ब्रजेश श्रीवास्तव ने निभाई। जिसका क्षेत्र में उल्लेखनीय योगदान है। शिव गोपाल मिश्र ने एवार्ड ऑफ एक्सीलेंस से सम्मानित किया गया। संचालन डॉ. बबिता अग्रवाल व धन्यवाद ज्ञापन डॉ. सुनंदादास ने किया।

## एंटी मलेरिया ड्रग्स के शोध पर मंथन

विज्ञान परिषद में प्रोफेसरों, शोधार्थियों ने पढ़े शोधपत्र

प्रयागराज। विज्ञान परिषद में 'इनोवेटिव फ्रंटियर्स इन एप्लाइड साइंसेज' विषय पर आयोजित तीन दिवसीय राष्ट्रीय संगोष्ठी के दूसरे दिन दिल्ली विश्वविद्यालय के प्रो. सतीश अवस्थी ने एंटी मलेरिया ड्रग्स पर किए गए रिसर्च वर्क के बारे में जानकारी दी। बताया कि उन्होंने पौधों के द्वारा आर्टिमिसनिन नामक पदार्थ को प्राप्त किया है जो मलेरिया संक्रमण को रोकने के लिए बेहद उपयोगी है। सीएमपी डिग्री कॉलेज के रसायन विभाग विभाग की केमिकल सोसायटी एवं विज्ञान परिषद के संयुक्त तत्वावधान में आयोजित संगोष्ठी के द्वितीय सत्र में प्रख्यात रसायनशास्त्री प्रो. कृष्णा मिश्रा ने कहा कि तकनीकी का उपयोग करके ही अशिक्षा, कृषि एवं स्वास्थ्य



संबंधी गंभीर समस्याओं से निपट जा सकता है। केमिकल सोसायटी की ओर से विज्ञान के क्षेत्र में उल्लेखनीय योगदान के लिए प्रो. कृष्णा मिश्रा को एवार्ड ऑफ एक्सीलेंस से सम्मानित किया गया। बीएचयू के प्रो. केके उपाध्याय ने नैनो पार्टिकल पर व्याख्यान देते हुए कहा कि इनकी विविधताओं से भरी दुनिया ने मानव सभ्यता को हमेशा से आकर्षित किया है। संगोष्ठी के दौरान प्रोफेसरों एवं शोधार्थियों ने अपने शोधपत्र प्रस्तुत किए।

हैं। इसके लिए छात्रों को दिव्य आभार क साथ 2019 सफलता य और से केन्द्रीय तकनी फेलोशिप में वदोती

## शोध में नवाचार वक्त की जरूरत

विज्ञान परिषद में हुई संगोष्ठी में बोले डॉ. शिव गोपाल मिश्र

प्रयागराज। शोध में नवाचार वक्त की जरूरत है। यह बात डॉ. शिव गोपाल मिश्र ने सीएमपी डिग्री कॉलेज के रसायन विज्ञान विभाग की केमिकल सोसायटी एवं विज्ञान परिषद के संयुक्त तत्वावधान में आयोजित राष्ट्रीय संगोष्ठी के उद्घाटन पर बतौर मुख्य अतिथि कही।

'इनोवेटिव फ्रंटियर्स इन एप्लाइड साइंसेज' विषय पर आयोजित तीन दिवसीय संगोष्ठी के विशिष्ट अतिथि प्रो. जगदंबा सिंह ने कहा कि रसायन विज्ञान के बिना कोई भी विषय अधूरा है। ग्रीन केमिस्ट्री पर्यावरण की दृष्टि से बहुत उपयोगी है। इस मौके पर अतिथियों ने केमिकल सोसायटी द्वारा प्रकाशित 'प्रेम वर्ड' के अंक तीन एवं चार डॉ. दीपा श्रीवास्तव की पुस्तक का विमोचन भी किया। इस मौके पर डॉ. शिव गोपाल मिश्र एवं प्रो. जगदंबा सिंह को एवार्ड ऑफ एक्सीलेंस से सम्मानित किया गया। स्वागत भाषण में डॉ. अभिषेक श्रीवास्तव ने दिया। डॉ. अर्चना पांडेय केमिकल सोसायटी का परिचय दिया जबकि डॉ. दीपा श्रीवास्तव ने विषय प्रवर्तन किया। अध्यक्षता सीएमपी के प्राचार्य डॉ. ब्रजेश श्रीवास्तव ने की। संचालन डॉ. बबिता अग्रवाल एवं धन्यवाद ज्ञापन डॉ. सुनंदा दास ने किया। कार्यक्रम में डॉ. संतोष श्रीवास्तव, डॉ. रौली श्रीवास्तव, डॉ. मृदुला त्रिपाठी, डॉ. मोनिका सिंह, डॉ. दीपांजली पांडेय, डॉ. अकरम अली आदि मौजूद रहे।





# चौधरी महादेव प्रसाद महाविद्यालय C. M. P. DEGREE COLLEGE (A Constituent P.G. College, University of Allahabad)



Under the Strengthening Component of DBT Star College Scheme

Website: [www.cmpcollege.ac.in](http://www.cmpcollege.ac.in)

2019



## MEMORANDUM OF UNDERSTANDING (MOU)

BETWEEN

C.M.P. Degree College, Prayagraj

&

CytoGene Research & Development LLP



# चौधरी महादेव प्रसाद महाविद्यालय

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### MEMORANDUM OF UNDERSTANDING

This Memorandum of Understanding (hereinafter called as the 'MOU') is entered into 1st day of August 2019,

#### BETWEEN

C.M.P. Degree College, Prayagraj represented herein by its Prof. Ajay Prakash Khare (Principal, C.M.P. Degree College, Prayagraj) (hereinafter referred as 'First Party', the academic institution which expression, unless excluded by or repugnant to the subject or context shall include its successors – in-office, administrators and assigns).

#### AND

CytoGene Research & Development, Lucknow, U.P. and represented herein by its Dr. Subject Kumar Singh (Director) (hereinafter referred to as "Second Party", company which expression, unless excluded by or repugnant to the subject or context shall include its successors – in-office, administrators and assigns).

(First Party and Second Party are hereinafter jointly referred to as 'Parties' and individually as 'Party').

#### WHEREAS:

- First Party is a Higher Educational Institution named:
  - C.M.P. Degree College, Prayagraj.
- First Party & Second Party believe that collaboration and co-operation between themselves will promote more effective use of each of their resources, and provide each of them with enhanced opportunities.
- The Parties intend to cooperate and focus their efforts on cooperation within



PRINCIPAL  
C.M.P. DEGREE COLLEGE  
PRAYAGRAJ



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**AGREED:**

For C.M.P. Degree College,  
Prayagraj, U.P.,

For CytoGene Research & Development LLP,  
Lucknow U.P.

Authorized Signatory

Authorized Signatory

<b>First Party:</b> Brijesh Kumar, Principal, C.M.P. Degree College, Prayagraj	
<b>Name of Institution</b>	C.M.P. Degree College
<b>Address</b>	Prayagraj, Uttar Pradesh 211002
<b>Contact Details</b>	+91-9451726637
<b>E-mails</b>	bks_1957@yahoo.co.in
<b>Web</b>	<a href="http://www.cmpcollege.com">www.cmpcollege.com</a>

<b>Second Party:</b> Dr. Sujeet Kumar Singh, Director, CytoGene Research & Development, Lucknow, U.P.	
<b>Name of Institution</b>	CytoGene Research & Development LLP, Lucknow U.P.
<b>Address</b>	K-51, Agro Park, UPSIDA Industrial Area, Kursi Road (Lucknow) Dist - Barabanki - 225001
<b>Contact Details</b>	+91-7703092222
<b>E-mails</b>	director@cytogene.in
<b>Web</b>	<a href="http://www.cytogene.in">www.cytogene.in</a>

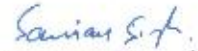
Witness 1:

  
  
Co-ordinator

Witness 2:

Dr. Amita PANDEY  
ASSOCIATE PROF.  
DEPT. OF BOTANY.

Witness 3:

  
(DR. SANJAY SINGH)  
ASSOCIATE PROFESSOR,  
DEPT. OF BOTANY,  
CMP DEGREE COLLEGE.

Witness 4:

DR. BABITA AGRAWAL,  
COORDINATOR - NAAC  
CMP Degree College Prayagraj.





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isolation was given by Mr Vishal Maurya, **CytoGene Research & Development, Lucknow.**

**Biotechnology in Medicine**  
Exosomes- emerging tools for cancer diagnosis and the

**Ajay Singh, Ph.D.**  
University of South Alabama  
Mitchell Cancer Institute

From Ritu Yadav to Everyone  
yes sir

**Advances in Biotechnology**

Conceptual innovation ↔ Technological innovation

**“Out of the box” thinking**

- What is currently known
- What are the gaps in knowledge
- Putting forward a hypothesis
- Testing the hypothesis- often retesting
- Deriving meaningful interpretations

Dr. Spoorthy N Babu VIT University Tamil Nadu delivered a lecture on PCR and its applications on the second day of the workshop. Practical demonstration of preparation of master mix and set up of PCR was given by **Dr. Madhulika Singh, Director, CytoGeneResearch & Development,**



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Lucknow.

Zoom Meeting You are viewing Spoorthy N Babu's screen View Options

Recording...

**BIOTECHNOLOGY:  
PRINCIPLE &  
APPLICATIONS**

SPOORTHY N BABU

CBST, VELLORE INSTITUTE OF TECHNOLOGY

Mute Start Video Security Participants 182 Chat Share Screen Pause/Stop Recording Reactions End

Type here to search

Zoom Meeting

Preeti Maurya Deepti Pandey Khushaboo Soni Dr. Sanjay Singh

Remove Pin Recording...

Dr. Hemant, Banasthali Vidyapeeth

Participants (158)

Find a participant

- AK Arun Kumar
- AF Arzumand fatima
- Ask Me Info
- AS Astha Pandey
- AS Astha Singh
- AS Astha srivastava
- AP Avinash Pratap Singh
- AC Ayushi Chaudhary
- AS Ayushi Singh
- AS Ayushi Singh
- BD Bhavana Devi
- BS Bhavana Singh
- BS Bhavana Singh
- DV deepanshi verma

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

Type here to search

10:18 AM 11/27/2020

Third day of the workshop was marked by a fascinating lecture by Dr. Hemant Sharma, Department of Biotechnology, Banasthali Vidyapeeth, Jaipur on Microbiological Techniques. Practical demonstration of





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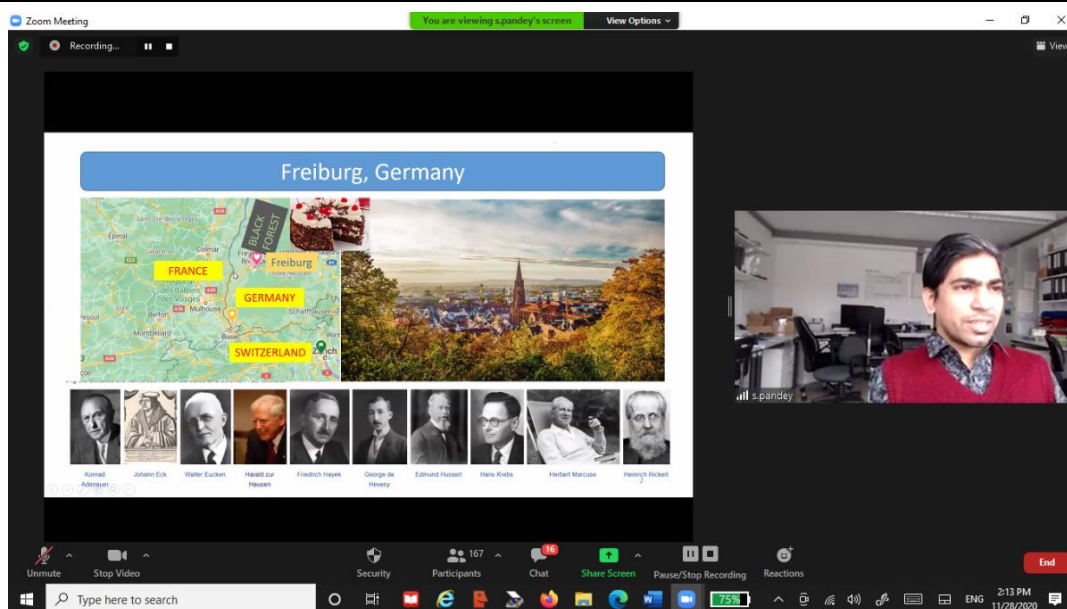
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microbiological Techniques was given by Ms Madhavi Singh under the guidance of Mr Sujit Kumar Singh, Director, Cytogene Research & Development, Lucknow.

**Dr. Saurabh Pandey**, Albert-Ludwigs University of Freiburg Molecular Plant Physiology, Germany delivered an enchanting talk on the fourth day of the workshop on Integration of face recognition tools to plant biotechnology microcallus identification through machine learning and image processing.



Mr Vishal Maurya conducted the session on the sixth day wherein various microbiological techniques were demonstrated

The last session included the lecture of **Dr. Madhulika Singh**, Director, CytoGeneResearch & Development, Lucknow on Bioinformatics and drug designing.

The valedictory session was chaired by the Dr Brijesh Kumar, Principal CMP College. The experiences of the workshop were shared by Mr Sujeet Kumar Singh, Director, Cytogene Research & Development, Lucknow. Departmental coordinators Dr Sanjay Singh and Dr Uma Rani Aggarwal shared their views on the workshop. The students actively participated in sharing their experience of the workshop and gave their feedbacks. The vote of thanks was proposed by Dr Sarita Srivastava, Associate Professor and Programme



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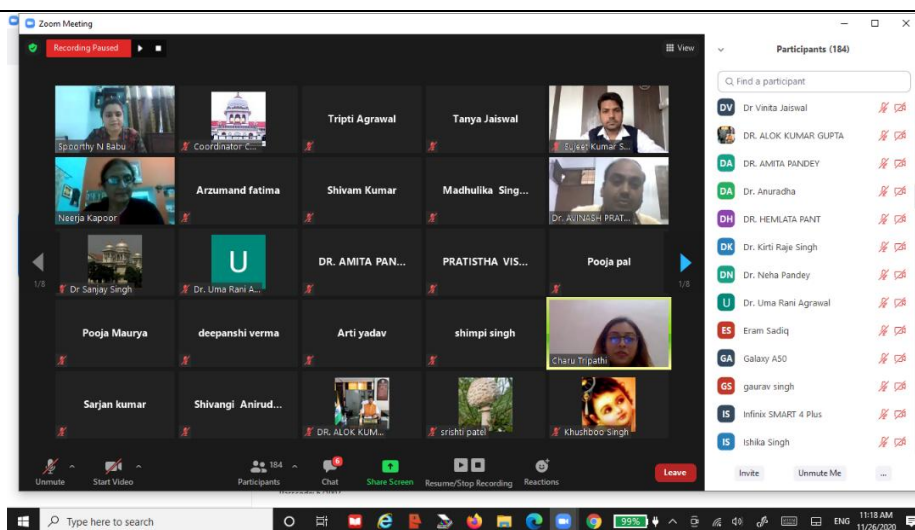
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Coordinator, DBT star college Project. The session was conducted by Dr Prateek Srivastava.



## Report for Inter disciplinary e-workshop on “Fundamentals of Biotechnology Techniques”

25<sup>th</sup> November 2020 – 1<sup>st</sup> December 2020

### 25<sup>th</sup> November, 2020

The workshop was organized under the aegis of DBT Star College Scheme from 25<sup>th</sup> November, 2020 to 1<sup>st</sup> December 2020 in collaboration with Cytogene Pvt Ltd at CMP College, Prayagraj in online mode by Departments of Botany and Zoology, CMP Degree College, Prayagraj. Dr. Sarita Srivastava (Co-ordinator of DBT Star College Scheme) started the Inaugural session by welcoming the Principal of the College, Dr. Brijesh Kumar and chief guest and chairperson of the inaugural session, Dr. Sangeeta Srivastava, Principal Scientist and Head, Division of Crop Improvement, ICAR-Indian Institute of Sugarcane Research, Lucknow and speaker for the session Dr. Ajay Pratap Singh. The inaugural session was conducted by Dr. Neha Pandey. She introduced the speakers and gave a background of DBT



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Star College Scheme. The speaker was formally welcomed by Dr. Sanjay Singh, Convenor of Botany Department and Departmental Coordinator of DBT Star College Scheme for the Botany Department. He welcomed the guests and thanked the Principal and President of the College. This was followed by a few encouraging words by the principal, Dr. Brijesh Kumar. Dr. Sarita Srivastava then gave a brief introduction of Dr. Sangeeta Srivastava and Dr. Ajay Pratap Singh, and highlighted the role of biotechnology and bioinformatics in present day research arena. Dr. Ajay Pratap Singh, Mitchell Cancer Institute, University of South Alabama, USA delivered the keynote lecture on “Biotechnology in Medicine” and the role of exosomes as an emerging tool for Cancer Diagnostics. Dr. Ajay Pratap Singh highlighted the role of biotechnology which has been recognized from ancient times, such as in preparations of curd, vinegar, bread, traditional medicines, etc, to modern times, i.e., development of vaccines, gene therapy, molecular breeding, stem cell therapy, tissue culture, tissue engineering and bio-printing. He told the audience about the importance of biotechnology in the development of diagnostic techniques (ELISA, RT-PCR, FISH), production of antibodies, role in COVID-19 testing. He then divulged the research being carried out in in laboratory on mechanisms underlying tumor progression and therapy resistance mechanism, tumor cell microenvironment/macroenvironment interaction. He elucidated the role of exosomes, microsomes, apoptotic bodies in development of diagnostic techniques (as a drug delivery vehicle) by testing the biomarkers that they carry, and role of exosomes in immunosuppression that is induced by chemotherapy. The vote of thanks for this session was proposed by Dr. Charu Tripathi.

After inaugural session, the first session of the workshop was initiated on DNA extraction from plant leaves. Dr. Uma Rani Agarwal, Departmental coordinator of DBT Star college Scheme for Zoology Department welcomed Er. Sujeet Kumar Singh of Cytogene Pvt Ltd. He gave an overview of all the topics that would be covered during the entire span of the workshop. He then handed over the session to Mr. Vishal Maurya who explained the process



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of DNA isolation and provided hands-on demonstration of the technique in a detailed and step-wise manner. He gave a demonstration of DNA isolation from plant leaves by using CTAB method. At the end of the session, the isolated DNA was dissolved in TE buffer and stored in refrigerator.

DNA extraction from Blood samples

After this Mr. Vishal Maurya demonstrated the step wise procedure of isolation of DNA from blood. For this he used unclotted blood in EDTA vials. TKM1 and TMK2 buffers were used for suspending the cells and anionic detergent SDS was used for rupturing WBCs and for protein denaturation. DNA was precipitated using Ethanol, dried and resuspended in TE buffer.

Agarose gel electrophoresis:

Agarose gel electrophoresis was performed on 0.8% agarose gel for both samples of DNA isolated. After this, the isolated DNA was visualized under UV light as a high molecular band at the top of the gel. The result was discussed.

**26<sup>th</sup> November, 2020**

The session started at 10 AM. A lecture was given by Dr. Spoorthy N Babu, VIT University, Tamil Nadu on PCR and its application. Dr. Babu discussed about the principle and applications of PCR. She also discussed about the variants of PCR that have found application in various areas. Dr. Babu also threw some light on the criteria that must be kept in mind when designing primers for PCR. The session was chaired by Dr. Neerja Kapoor and vote of thanks was proposed by Dr. Avinash Pratap Singh of Botany Department.

In the next session, polymerase chain reaction was discussed by Mr. Vishal Maurya. The interactive practical session dealt with all the theoretical as well as practical aspects of PCR.



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He explained the function of each and every reagent that must be added to PCR master mix, and in how much quantity. The preparation of master mix was then demonstrated. In this session, the technical details of thermal cycler were discussed, so that the students could understand how and why a particular gene is amplified. After this, Mr. Vishal Maurya discussed the variants and application of PCR, during the time when the PCR reaction was going on. After completion of the PCR reaction, the agarose gel electrophoresis was performed for the amplified gene.

**27<sup>th</sup> November 2020**

The third day of the workshop was initiated with a guest lecture on Microbiological Techniques by Dr. Hemant Sharma, Department of Biotechnology, Banasthali Vidyapeeth, Jaipur. This session was conducted by Dr. Sarita Srivastava and chaired by Dr. Alok Singh. Dr. Sharma's lecture was focused on the growth and isolation of microbes, different types of culture media, sterile culture techniques and key microbiological methods.

The next session was practical session which was conducted by Mr. Vishal Maurya. He explained why culture media is prepared and what are the components of Nutrient Agar media. Preparation of Culture media and sterilization by autoclave was demonstrated. The working of autoclave and its conditions were explained. The Nutrient Agar media was prepared and autoclaved. He gave a detailed demonstration of general protocol and safety measures to be followed during working in Laminar chambers, how to pour agar in petri dishes, how to open petri plates and how to store them for future use. He also explained the working of Laminar Air Flow cabinets. After this, Mr. Maurya explained how samples are serially diluted to obtain pure microbial colonies. He went on to demonstrate the process of serial dilution. After this, he demonstrated and explained the process of spreading the serially diluted samples on nutrient agar plates and kept the plates for incubation. Mr Maurya also explained the four quadrant streak plate method for culturing pure colonies of microbes and



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demonstrated it.

## 28<sup>th</sup> November, 2020

A guest lecture was delivered by Dr. Saurabh Pandey, Albert-Ludwigs University of Freiburg. The topic of the lecture was Application of Plant Biotechnology. The session was chaired by Dr. Sarita Srivastava. Dr. Pandey was instrumental in enlightening the audience about various advances in plant biotechnology such as tissue culture and use of genetic engineering for the production of sustainable plant varieties.

## 30<sup>th</sup> November, 2020

Report by Dr. Avinash

Staining Techniques: were demonstrated. This session was chaired by Dr. Pallavi Rai.

Gram staining and streaking

Antimicrobial Activity test:

Introduction to Bioinformatics:

Sequence retrieval, FASTA and BLAST

## 01<sup>st</sup> December, 2020

An online test of 30 minutes was conducted by Cytogene Pvt Ltd to check the progress of students. Guest lecture on Bioinformatics and Drug designing by Dr. Madhulika Singh, Director, CytoGene Research and Development, Lucknow. After this, Multiple Sequence Alignment (MSA), Phylogenetic tree construction and Drug designing Selection of target gene/protein and its sequence retrieval of target gene/protein using UniProt 3D protein structure visualization



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## Valedictory Session:

The Valedictory session was conducted by Dr. Prateek Srivastava of Botany Department

**REPORT on 7-day interdisciplinary Faculty Development Programme (FDP) on "Bioinformatics and Computational Biology: Introduction and Approaches" Jointly Organized by The Departments of Botany, Zoology and Chemistry, C.M.P. PG College, University of Allahabad in collaboration with Cytogene Research and Developments LPP Lucknow**

CHAUDHARY MAHADEV PRASAD DEGREE COLLEGE  
A Constituent PG College of University of Allahabad - Prayagraj-211001 U.P. INDIA

**DBT STAR COLLEGE**  
Inter-disciplinary Faculty Development Program  
Seven days E-Workshop on

"Bioinformatics and Computational Biology: Introduction and Approaches"  
9<sup>th</sup> December 2020 -15<sup>th</sup> December 2020  
"Under the strengthening component of DBT Star College Project"

Inaugural Program: 9<sup>th</sup> December 2020; 2:00 PM; Zoom Platform

**CHAIRPERSON**  
Prof. U.C. Lavanaia  
FNA, FNAScJ Professor Emeritus  
Department of Botany University of Lucknow  
Former Chief Scientist, CIMAP-CIR Lucknow

**Patron**  
Dr. Brijesh Kumar  
Principal

**Chief Patron**  
Ch. Jitendra Nath Singh  
Chairman Governing body  
President, KP Trust Prayagraj

**KEY NOTE SPEAKER**  
Dr. Mehar Hasan Asif  
Principal Scientist  
Molecular Biology and Biotechnology Division  
CSIR-National Botanical Research Institute-Lucknow

JOINTLY ORGANISED BY  
DEPARTMENTS OF BOTANY, ZOOLOGY & CHEMISTRY  
CHAUDHARY MAHADEV PRASAD DEGREE COLLEGE, PRAYAGRAJ

The departments of Botany, Zoology and Chemistry, CMP PG College, have jointly organized an interdisciplinary online FDP under the DBT star college scheme from 9th December 2020 to 15th December 2020.

The inaugural of the workshop was held on 9th December 2020 (Wednesday) from 2:00 PM onwards.

The major objective and aim of the FDP program are to give exposure to the faculties of different institutions to provide hands on training on various bioinformatics approaches through various tools and software. Today second day session was compered by Dr Sarita Srivastava, Coordinator-DBT Star College Project. Dr Kirti Raje Singe introduce the Key note speaker of the programme.

In the Inaugural session Principal, Dr. Brijesh Kumar, and Patron of the Programme welcomed the participant and guest the course. He also explained the significance and benefits of FDP. He also



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underlined the duties and responsibilities of teachers to update themselves in their areas of specialization. More than 200 faculties as well as research scholar from different department participated in this FDP from different part of countries.

The keynote address was delivered by Dr. Umashankar, Ex. Principal Scientist, Indian Institute Of Toxicology and Research, Lucknow on the topic "DNA Barcoding". He explains the basics of Barcoding and tell that Barcoding is a molecular tool for species identification and this can be done by a small fragment of DNA using PCR and other tools. He also explain the role of barcoding in biodiversity conservation. .

In the second session Er. Sujeet Kumar Singh and Dr. Madhulika Singh, Director of Cytogene Research and Development, Lucknow also gives the hands-on training of Bioinformatics on the topic "Homology Modelling, Active site Prediction and Ligand Dataset Preparation" to our participant.

Report on 3 Days National workshop on "Gene Cloning and its expressions to produce genetically modified organisms" from 13th to 15th September 2018 organized by Department of Botany in collaboration with Cytogene Research and Development LPP Lucknow





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The screenshot shows a Zoom meeting interface. At the top, there is a header with the Zoom Meeting title and a recording indicator. Below this is a grid of participant video feeds. The main content area displays a presentation slide with the following text:

Bioinformatics is a field of study that uses computation to extract knowledge from biological data.

It includes the **collection, storage, retrieval, manipulation and modelling of data** for **analysis, visualization or prediction** through the development of algorithms and software.

At the bottom of the slide, there is a video feed of a participant, likely the presenter, who is a woman with dark hair, wearing a grey top. The Zoom interface at the bottom shows various controls like Unmute, Start Video, Security, Participants (139), Chat, Share Screen, Pause/Stop Recording, and Reactions. The system tray at the very bottom shows the Windows search bar, taskbar icons, and system clock (2:27 PM, 12/9/2020).



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The image shows a Zoom meeting interface. The main window displays a presentation slide titled "Origin of DNA Barcoding". The slide content is as follows:

## Origin of DNA Barcoding

Paul Hebert -coined the term DNA barcode

In 2003, Prof. **Paul Hebert** from the University of Guelph, Canada proposed the use of DNA barcodes.

He proposed that a short DNA sequence from a gene found in all animals can be used to identify species because in each species the sequence varies slightly.

A small photo of Paul Hebert is shown in the bottom right corner of the slide.

The Zoom interface also shows a list of participants on the right side:

- VK Vanchhit kesharwani
- VS Vasundhara Singh
- VS Vibha Shukla
- VK Vijay Kumar Patel
- VT Vikas Tiwari
- V VishalSingh
- Anuradha Singh
- ASHWANI SHARMA
- DS Deepa Srivastava
- MZ Mohd Zaheeruddin Beg
- Nidhi Mishra
- R Ritu Ravi
- SS Sadhana singh
- Seraj Ahmad

The Zoom meeting controls at the bottom show options like Mute, Stop Video, Security, Participants (102), Chat, Share Screen, Pause/Stop Recording, Reactions, and End. The system tray at the bottom indicates the time is 2:04 PM on 12/9/2020.

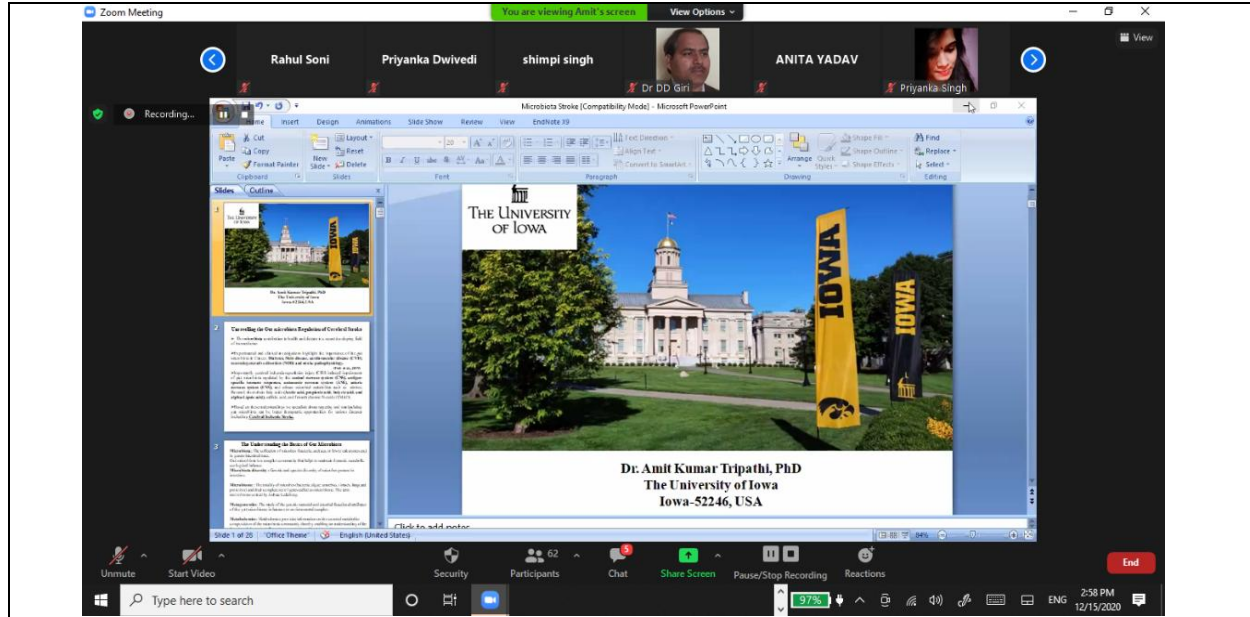


# चौधरी महादेव प्रसाद महाविद्यालय C. M. P. DEGREE COLLEGE

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Under the Strengthening Component of DBT Star College Scheme

Website: [www.cmpcollege.ac.in](http://www.cmpcollege.ac.in)



**CHAUDHARY MAHADEO PRASAD DEGREE COLLEGE**  
A Constituent PG College of University of Allahabad - Prayagraj-211001 U.P. INDIA

**DBT STAR COLLEGE**  
Inter-disciplinary Faculty Development Program  
Seven days E-Workshop on

**"Bioinformatics and Computational Biology: Introduction and Approaches"**  
9<sup>th</sup> December 2020 -15<sup>th</sup> December 2020  
"Under the strengthening component of DBT Star College Project"

**VALEDICTORY FUNCTION**  
15<sup>th</sup> December 2020; 4:00 PM; Zoom Platform  
Join Zoom Meeting: Meeting ID: 674 439 6668 Passcode: 5Wcuei

 <b>Patron</b> <b>Dr. Brijesh Kumar</b> Principal	 <b>Chief Guest</b> <b>Prof. Sangeeta Srivastava</b> Hon'ble Vice Chancellor University of Allahabad	 <b>Guest Of Honor</b> <b>Ch. Raghvendra Nath Singh</b> Vice President, KP Trust Prayagraj
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**PROGRAM COORDINATOR**  
**Dr. Sarita Srivastava**  
Coordinator - DBT Star College Project  
Associate Professor, Department of Botany  
Chaudhary Mahadeo Prasad Degree College  
University of Allahabad, Prayagraj  
Ph: 9335530055 Email: cmpdbtstar03@gmail.com

JOINTLY ORGANISED BY  
DEPARTMENTS OF BOTANY, ZOOLOGY & CHEMISTRY  
**CHAUDHARY MAHADEO PRASAD DEGREE COLLEGE, PRAYAGRAJ**



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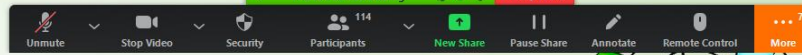


## Words by the Chief Guest



**Prof Sangeeta Srivastava**

Hon'ble Vice Chancellor





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2020



MEMORANDUM OF UNDERSTANDING

BETWEEN

CHAUDHARY MAHADEO PRASAD DEGREE COLLEGE, PRAYAGRAJ  
INDIA

&

VIJNANA PARISHAD PRAYAG, PRAYAGRAJ, INDIA

ON

PARTNERSHIP FOR JOINT CAPACITY BUILDING, KNOWLEDGE EXCHANGE  
PROGRAM AND INTER-INSTITUTIONAL ACTIVITIES



# चौधरी महादेव प्रसाद महाविद्यालय

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### Authorized Signatories

Each party/ institution represents that the individuals signing this memorandum of understanding have the authority to sign on its behalf in the capacity indicated.

IN WITNESS whereof the undersigned, being duly authorized thereto, have on behalf of the parties hereto signed the present Memorandum of Understanding at the place and on the day stipulated below

Vijnana Parishad, Prayagraj

Chaudhary Mahadeo Prasad Degree College

Signature: Shiv Gopal Mishra

Signature: Brijesh Kumar

Name: Prof. Shiv Gopal Mishra

Name: Dr. Brijesh Kumar

Title: Pradhanmantri

Title: Principal

Date: 8.11.2020

Date: 8 Nov 2020



# चौधरी महादेव प्रसाद महाविद्यालय C. M. P. DEGREE COLLEGE

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## रिपोर्ट 'विज्ञान सर्वत्र पूज्यते'

ऋतु रवि  
शोध छात्र

आज़ादी का अमृत महोत्सव के अंतर्गत, प्रमुख वैज्ञानिक सलाहकार के कार्यालय और संस्कृति मंत्रालय, भारत सरकार ने 22 से 28 फरवरी, 2022 के दौरान विज्ञान और प्रौद्योगिकी के गौरवशाली सप्ताह के रूप में मनाने की योजना बनाई, जिसका शीर्षक 'विज्ञान सर्वत्र पूज्यते' (विज्ञान और प्रौद्योगिकी सर्वत्र पूज्यन्तीव) रखा।

इस गौरवशाली सप्ताह की शुरुआत 22 फरवरी के भव्य उद्घाटन कार्यक्रम से हुई और 28 फरवरी को नई दिल्ली में भव्य समापन के साथ समाप्त हुआ।

विज्ञान परिषद, प्रयाग के तत्वावधान में 22 फरवरी, 2022 को विज्ञान प्रसार, विज्ञान एवं प्रौद्योगिकी मंत्रालय, भारत सरकार, संस्कृति मंत्रालय, भारत सरकार तथा प्रधान वैज्ञानिक सलाहकार कार्यालय द्वारा संयुक्त रूप से प्रायोजित विज्ञान सप्ताह 'विज्ञान सर्वत्र पूज्यते' कार्यक्रम का उद्घाटन संपन्न हुआ।

विज्ञान सप्ताह कार्यक्रम 'विज्ञान सर्वत्र पूज्यते' के दूसरे दिन 23 फरवरी, 2022 को पूर्वाह्न में अनेक विद्यालयों के हज़ारों छात्र छात्राओं एवं उनके शिक्षकों ने विज्ञान परिषद प्रांगण में प्रदर्शित पोस्टर प्रदर्शनी, पुस्तक मेले तथा विज्ञान फिल्मों का अवलोकन किया।

विज्ञान सप्ताह कार्यक्रम के तीसरे दिन, 24 फरवरी, 2022 को पूर्वाह्न में विभिन्न विद्यालयों एवं कॉलेजों के छात्र-छात्राओं ने पोस्टर प्रतियोगिता में प्रतिभागिता की। इसमें सीएमपी डिग्री कॉलेज के शोध छात्र सिद्धार्थ अग्रवाल, साक्षी सिंह, श्वेता जायसवाल, आफरीन फातिमा, अपूर्वा सिंह परिहार, सेराज अहमद, सदानंद यादव एवं कन्हैयालाल भी प्रतिभागी रहे। डॉ. सुनंदा दास, डॉ. अकरम अली, डॉ. विशाल श्रीवास्तव और डॉ. रुपाली मिश्रा ने निर्णायक की भूमिका निभाई।

इसके पश्चात अपराह्न में सीएमपी डिग्री कॉलेज की रसायन विज्ञान की एसोसिएट प्रोफेसर डॉ. अर्चना पांडेय ने भारत की विशिष्ट महिला वैज्ञानिकों के जीवन की महत्वपूर्ण घटनाओं और संघर्षों के बारे में व्याख्यान दिया।

विज्ञान सप्ताह कार्यक्रम 'विज्ञान सर्वत्र पूज्यते' के चौथे दिन, 25 फरवरी, 2022 को पूर्वाह्न में स्कूली बच्चों की निबंध प्रतियोगिता आयोजित की गयी। जिसमें विभिन्न स्कूलों के 35 प्रतिभागियों ने भाग लिया। इस प्रतियोगिता में सीएमपी डिग्री कॉलेज के शोध छात्र अरुनी शर्मा भी प्रतिभागी रहे, जिन्होंने निबंध प्रतियोगिता में द्वितीय स्थान प्राप्त हुआ। श्रीमती राधिका मिश्रा, डॉ. बबिता अग्रवाल, डॉ. दीपाञ्जलि पांडेय और हिमानी चौरसिका निबंध प्रतियोगिता के निर्णायक रहे।

विज्ञान सप्ताह कार्यक्रम के पाँचवें दिन, 26 फरवरी, 2022 को पूर्वाह्न में स्कूली बच्चों की भाषण प्रतियोगिता का आयोजन किया गया, जिसमें विभिन्न विद्यालयों के लगभग 45 छात्रों ने भाग लिया। डॉ. मीना राय, डॉ. अनिल शुक्ला,



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डॉ. संतोष श्रीवास्तव तथा डॉ. दुर्गेशा नंदिनी घोस्वामी ने इस प्रतियोगिता में निर्णायक की भूमिका निभाई।

विज्ञान सप्ताह कार्यक्रम, "विज्ञान सर्वत्र पूज्यते" के सातवें एवं अंतिम दिन, 28 फरवरी, 2022 को विज्ञान सप्ताह की अंतर्गत आयोजित पोस्टर, निबंध एवं भाषण प्रतियोगिता के विजेताओं को पुरस्कार वितरित किया गया तथा स्वयंसेवकों एवं आयोजन समिति के सदस्यों को सम्मानित किया गया।

विज्ञान परिषद्, प्रयाग के तत्त्वधान में आयोजित विज्ञान सप्ताह कार्यक्रम "विज्ञान सर्वत्र पूज्यते" को सर्वतोभान संपन्न बनाने में स्वयंसेवकों ने अपना सम्पूर्ण योगदान दिया। कार्यक्रम के आरम्भ होने से पूर्व तथा कार्यक्रम के आरम्भ से लेकर समापन तक स्वयंसेवकों ने विभिन्न तरह के कार्य किये।

स्वयंसेवकों के इस निस्वार्थ योगदान के कारण ही यह सात दिवसीय कार्यक्रम बिना किसी अवरोधन के सहज भाव से संपन्न हो सका। ये स्वयंसेवक सीएमपी डिग्री कॉलेज के शोधछात्र रहें, जिनके नाम क्रमशः हैं – आफरीन फातिमा, आकांक्षा करयप, अमित जायसवाल, अनिल कुमार पाल, अपूर्वा सिंह परिहार, अश्वनी शर्मा, चेवांशी श्रीवास्तव, गरिमा, कन्हैयालाल, कुलदीप मिश्रा, मनोज कुमार, मनोज शुक्ला, मोहम्मद जहीरुद्दीन बेग, निवेदिता श्रीवास्तव, प्रगति, रौरान कुमार, ऋतु रवि, रोहित कुमार, सदानंद यादव, साक्षी सिंह, सेराज अहमद, शिवानी पांडेय, श्रद्धा तिवारी, श्वेता जायसवाल एवं सिद्धार्थ अग्रवाल।



अंततः विभिन्न अतिथियों, छात्र-छात्राओं, शिक्षकों, स्वयंसेवकों, आयोजित समिति के सदस्यों एवं विज्ञान परिषद्, प्रयाग के सदस्यों के निस्वार्थ योगदान से ही आकांक्षी के अमृत महोत्सव के अंतर्गत, विज्ञान और प्रौद्योगिकी का गौरवशाली पर्व "विज्ञान सर्वत्र पूज्यते" का सप्ताहदिवसीय कार्यक्रम विधिवत संपन्न हो सका।







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### ANNEXURE 3

#### SERVICES TO BE PROVIDED BY UPTEC

1. To assist/ provide consultancy for establishing the Class / Lab facility for the courses.
2. To assist in implementation and successful running of the program at the Institute.
3. To assist in course/program promotion in the Institute.
4. To provide the faculty for conducting the course except Computer awareness module.
5. To facilitate examination registration of the participants enrolled for the Programmes after completion of the Programme and completion of necessary formalities including payment of examination fees etc.
6. To issue Certificates after completion of the course/Examination to the students duly signed by UPTEC. UPTEC shall also help in getting the Certificate issued From NIELIT directly to the students who have enrolled for the courses of NIELIT.

*Brijesh Kumar*  
12.1.2021  
Principal  
C.M.P. Degree College  
Allahabad

*Ramp*  
Dr. R K Jaiswal  
Executive Director & CEO  
UPTEC Computer Consultancy Limited



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## डिप्लोमा इन कंप्यूटराइज्ड अकाउंटिंग

डिप्लोमा इन कंप्यूटराइज्ड अकाउंटिंग जिस कोर्स का संचालन भारत के प्रमुख कंप्यूटर संस्थान यूपीटेक और सीएमपी कॉलेज के मध्य एक एम0 ओ0 यू0 के द्वारा संचालित किया जा रहा है। जिसका प्रारंभ 15 मार्च 2021 से हुआ था जिसमें कुल 30 विद्यार्थियों ने प्रवेश लिया एवं यह 6 माह का कोर्स है जिसका समापन 30 सितंबर 2021 को हुआ। प्रथम बैच का संचालन ऑनलाइन मोड में किया गया। जिसमें प्रथम 3 माह कंप्यूटर से संबंधित प्रारंभिक जानकारी दी गई एवं बाद के 3 माह में कंप्यूटर पर एकाउंटिंग कैसे किया जाता है इसको सिखाया गया जिसके अंतर्गत टैली सॉफ्टवेयर पर विद्यार्थियों को एकाउंटिंग करना सिखाया गया।

The screenshot shows a web browser window displaying a page with financial data. The page title is "POWER OF SIMPLICITY". The content includes a list of transactions for the month of April, followed by a table titled "Books of TIM Enterprises for the month of April".

Date (2017)	Particulars	L.F.	Debit	Credit
Apr. 1	Cash A/c To Capital A/c (Business started with cash)	Dr.	5,00,000	5,00,000
Apr. 2	Purchases A/c To Mohan A/c (Goods purchased on credit)	Dr.	40,000	40,000
Apr. 4	Stationery A/c To Cash A/c (Purchase of stationery for cash)	Dr.	2,000	2,000
Apr. 5	UTI Bank A/c To Cash A/c (Opened a bank account with: UTI Bank)	Dr.	50,000	50,000



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## Online Class of DCAC Courses using Tally taken by Shilpi Ma'am from UPTECH

The screenshot shows a Zoom meeting interface. The main window displays a webpage with a journal entry problem for January. The problem is as follows:

Jan.	Rs.	
1	Commenced business with cash	80,000
2	Deposited cash with bank	40,000
3	Purchased goods by paying cash	5,000
4	Purchased goods from Lipton & Co. on credit	10,000
5	Sold goods to Joy and received cash	11,000
6	Paid salaries by cash	5,000
7	Paid Lipton & Co. by cheque for the purchases made on 4th Jan.	
8	Bought furniture by cash	4,000
9	Paid electricity charges by cash	1,000
10	Bank paid insurance premium on furniture as per standing instructions	300

**Solution**

In the books of Jeyaseeli  
Journal entries

The participants list on the right side of the screen includes:

- Shilpi Khare (Host)
- Abeer Dwivedi
- Adarsh Dwivedi
- Arni Sharma
- Anchal Singh
- Aryan Gupta
- Ashish Jaiswal
- Avanish Kumar Verma
- Avanish Kumar Verma
- AVIRAL AGARWAL
- Manish yadav
- Muhammad Najmus Saquib

## Online Class of DCAC Courses using Tally taken by Shilpi Ma'am from UPTECH

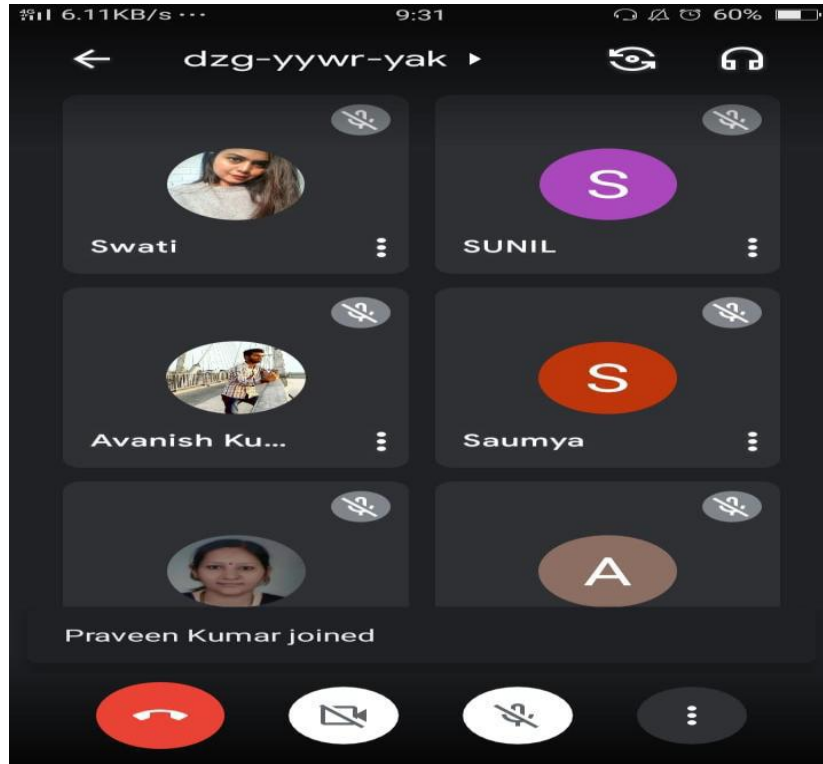


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Jan.	Rs.
1 Commenced business with cash	90,000
2 Deposited cash with bank	40,000
3 Purchased goods by paying cash	5,000
4 Purchased goods from Lipton & Co. on credit	10,000
5 Sold goods to Joy and received cash	11,000
6 Paid salaries by cash	5,000
7 Paid Lipton & Co. by cheque for the purchases made on 4th Jan.	
8 Bought furniture by cash	4,000
9 Paid electricity charges by cash	1,000
10 Bank paid insurance premium on furniture as per standing instructions	300

**Solution**

In the books of Jeyaseeli  
Journal entries

Online Class of DCAC Courses using Tally taken by Shilpi Ma'am from UPTECH



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## C. M. P. DEGREE COLLEGE

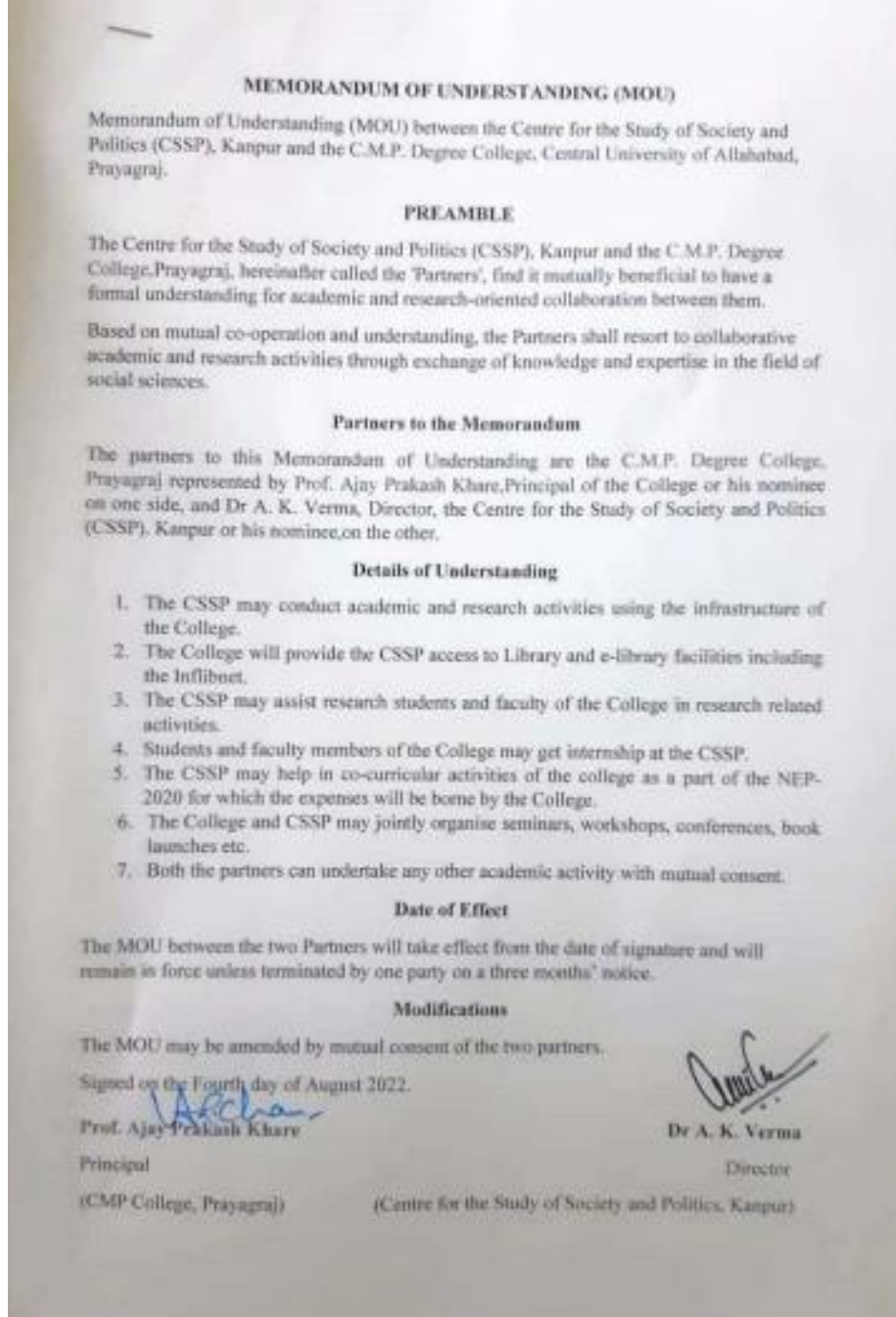
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2022





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## "रीविजिटिंग डेमोक्रेसी डिप्लोमेसी एंड डेवलपमेंट ऑफ इंडिया@75" विषय पर राष्ट्रीय संगोष्ठी का सफल आयोजन

आजादी के अमृत महोत्सव वर्ष की स्मृति में राजनीति विज्ञान विभाग, सी.एम.पी. डिग्री कॉलेज, प्रयागराज और सेंटर फॉर दी स्टडी ऑफ सोसाइटी एण्ड पॉलिटिक्स (सी.एस.एस.पी.), कानपुर के संयुक्त तत्वाधान में दिनांक 5 अगस्त 2022 "रीविजिटिंग डेमोक्रेसी डिप्लोमेसी एंड डेवलपमेंट ऑफ इंडिया@75" विषय पर एक राष्ट्रीय संगोष्ठी का सफल आयोजन किया गया। इस संगोष्ठी के उद्घाटन सत्र में मुख्य अतिथि प्रोफेसर पंकज कुमार, डीन, कॉलेज डेवलपमेंट और अध्यक्ष, राजनीति विज्ञान विभाग, इलाहाबाद विश्वविद्यालय, और विशिष्ट अतिथि प्रोफेसर अनिल कुमार वर्मा, निदेशक सी.एस.एस.पी., कानपुर थे। संगोष्ठी के उद्घाटन सत्र में मुख्य वक्ता प्रोफेसर संजय श्रीवास्तव, राजनीति विज्ञान विभाग, काशी हिन्दू विश्वविद्यालय और विशिष्ट व्यक्त प्रोफेसर रिपु सूदन सिंह, अध्यक्ष, लोक प्रशासन विभाग, बाबासाहेब भीमराव अम्बेडकर केन्द्रीय विश्वविद्यालय, लखनऊ थे। सत्र की अध्यक्षता और अतिथियों का स्वागत कॉलेज के प्राचार्य प्रोफेसर अजय प्रकाश खरे ने किया। उद्घाटन सत्र में राष्ट्रीय संगोष्ठी के संयोजक डॉ गोविंद गौरव ने संगोष्ठी की संकल्पना प्रस्तुत की और संगोष्ठी के विषय और उसकी रूपरेखा पर प्रकाश डाला। कार्यक्रम में मुख्य अतिथियों के द्वारा संगोष्ठी की स्मारिका का विमोचन किया गया जिसमें 97 चयनित सारांशिकाओं को प्रकाशित किया गया।

उद्घाटन सत्र को संबोधित करते हुए प्रोफेसर पंकज कुमार ने लोकतंत्र के पुनर्मूल्यांकन की आवश्यकता और भारत में लोकतंत्र के समृद्ध इतिहास का विश्लेषण प्रस्तुत किया। इसी चर्चा को आगे बढ़ाते प्रोफेसर अनिल कुमार वर्मा ने लोकतंत्र और चुनावी राजनीति के निहितार्थ को स्पष्ट किया और सेंटर फॉर थे स्टडी ऑफ डेवलपिंग सोसाइटी के फेलो के रूप में किए गए अपने कार्यों और अनुभव को भी साझा किया। मुख्य व्यक्त प्रोफेसर संजय कुमार ने "मैपिंग इंडियन डिप्लोमेसी@75" विषय पर संगोष्ठी को संबोधित किया और बताया कि भारतीय कूटनीति की शुरुवात भारत के विदेश मंत्री ने नहीं बल्कि गृह मंत्री सरदार पटेल रियासतों के एकीकरण की सशक्त नीति और कार्यवाही से की थी। विशिष्ट व्यक्त प्रोफेसर रिपुसूदन सिंह ने 5 ट्रिलियन डॉलर की अर्थव्यवस्था का लक्ष्य, भारत में विकास और लोकतंत्र की चुनौतियां विषय पर प्रकाश डाला। इस सत्र में डॉ अनिल कुमार वर्मा की पुस्तक ए ग्रामर ऑफ पॉलिटिक्स और कॉलेज के रसायन विज्ञान विभाग की पुस्तक कोरोना: एक महामारी के अतिरिक्त डॉ गोविन्द गौरव और डॉ



# चौधरी महादेव प्रसाद महाविद्यालय C. M. P. DEGREE COLLEGE

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अरुण कुमार वर्मा के सम्पादन में आने वाली पुस्तक “इंडिया@75: डेमोक्रेसी, डिप्लोमेसी एण्ड डेवलपमेंट” के आवरण पृष्ठ का भी विमोचन हुआ।

इसके पश्चात तीन तकनीकी सत्रों में कुल 70 शोध पत्रों का प्रस्तुतीकरण किया गया। इन सत्रों की अध्यक्षता डॉ नीलिमा सिंह, डॉ शिव हर्ष सिंह और डॉ संघ सेन सिंह ने की। डॉ हिमांशु यादव, डॉ अतुल कुमार वर्मा और डॉ अखिलेश पाल क्रमशः इन तकनीकी सत्रों के सह-अध्यक्ष रहे। सत्र के अंत में तीन सर्वश्रेष्ठ पत्रों को प्रस्तुत करने वाले शोधार्थियों को पुरस्कृत भी किया गया।

संगोष्ठी के समापन सत्र में मुख्य अतिथि जी बी पंत सोशल साइंस इंस्टिट्यूट के निदेशक प्रोफेसर बट्टी नारायण और विशिष्ट अतिथि लखनऊ विश्वविद्यालय के राजनीति विज्ञान विभाग के पूर्व अध्यक्ष प्रोफेसर आर के मिश्र थे। इस सत्र की मुख्य वक्ता प्रोफेसर अनुराधा अग्रवाल, निदेशक, महिला अध्ययन केंद्र, इलाहाबाद विश्वविद्यालय ने भर में राजनीतिक विकास और लोकतान्त्रिक विमर्श को उठाया। वहीं विशिष्ट व्यक्ता जवाहर लाल नेहरू विश्वविद्यालय के डॉ अभिषेक श्रीवास्तव ने भारत की अंतर्राष्ट्रीय साझेदारी और वैश्विक स्तर पर उसकी नेतृत्व कुशलता, विशेषकर कोविड काल का वृहद विश्लेषण प्रस्तुत किया।

सत्र के अंत में संयोजक डॉ गोविन्द गौरव ने संगोष्ठी की रिपोर्ट प्रस्तुत की और बताया कि इस राष्ट्रीय संगोष्ठी में भारत के दस राज्यों और 24 विश्वविद्यालयों से लगभग 200 शिक्षकों और शोधार्थियों ने अपने शोध पत्र प्रेषित किए जिनमें से समीक्षा के पश्चात 97 का प्रकाशन और तकनीकी सत्र में 70 का प्रस्तुतीकरण हुआ। इस तरह यह राष्ट्रीय संगोष्ठी अपने उद्देश्य को सफलतापूर्वक प्राप्त करने में सफल रही।

कार्यक्रम के अंत में आयोजन सचिव डॉ अरुण कुमार वर्मा ने धन्यवाद ज्ञापन किया और इसका संचालन राजनीति विज्ञान विभाग के छात्र भार्गव कुमार ने किया। इस राष्ट्रीय संगोष्ठी में बड़ी संख्या में शिक्षकों और छात्रों की उपस्थिति रही। राजनीति विज्ञान विभाग के शोधार्थियों और परास्नातक छात्र-छात्राओं ने इस संगोष्ठी को सफल बनाने में पूरी तन्मयता से अपना योगदान दिया।





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"रीविजिटिंग डेमोक्रेसी डिप्लोमेसी एंड डेवेलपमेंट ऑफ इंडिया@75" विषय पर राष्ट्रीय संगोष्ठी

का उद्घाटन सत्र



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सत्र की अध्यक्षता और अतिथियों का स्वागत कॉलेज के प्राचार्य प्रोफेसर अजय प्रकाश खरे ने  
किया



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कार्यक्रम में मुख्य अतिथियों के द्वारा संगोष्ठी की स्मारिका का विमोचन किया गया



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## MEMORANDUM OF UNDERSTANDING (MOU)

BETWEEN

**C.M.P. Degree College, Prayagraj**

&

**Trivenika Sanskrit Parishad, Prayagraj**



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## MEMORANDUM OF UNDERSTANDING

This Memorandum of Understanding (hereinafter called as the 'MOU') is entered into 17th June 2022,

### BETWEEN

C.M.P. Degree College, Prayagraj represented herein by its Prof. Ajay Prakash Khare (Principal, C.M.P. Degree College, Prayagraj) (hereinafter referred as 'First Party', the academic institution which expression, unless excluded by or repugnant to the subject or context shall include its successors - in-office, administrators and assigns).

### AND

Trivenka Sanskrit Parishad Prayagraj (Reg. No. 905/2011-12) and represented herein by its Prof. Anand Kumar Srivastava (President) (hereinafter referred to as 'Second Party', registered society which expression, unless excluded by or repugnant to the subject or context shall include its successors - in-office, administrators and assigns).

(First Party and Second Party are hereinafter jointly referred to as 'Parties' and individually as 'Party').



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AGREED:

For C.M.P. Degree College,  
Prayagraj, U.P.

For Trivenika Sanskrit Parishad  
Prayagraj U.P.

Authorised



श्री० आनन्द कुमार श्रीवास्तव  
अथवा  
Trivenika Sanskrit Parishad  
Authorized Signatory

First Party: Prof. Ajay Prakash Khare, Principal, C.M.P. Degree College, Prayagraj	
Name of Institution	C.M.P. Degree College
Address	Prayagraj, Uttar Pradesh 211002
Contact Details	+91-9575683583
E-mails	Khare.7666@gmail.com
Web	<a href="http://www.cmpcollege.com">www.cmpcollege.com</a>

Second Party: Prof. Anand Kumar Srivastava, President, Trivenika Sanskrit Parishad, Prayagraj, U.P.

Name of Institution	Trivenika Sanskrit Parishad, Prayagraj, U.P.
Address	403, New Mumfordganj Prayagraj, U.P (211002)
Contact Details	+91-9415235638; +91-7007254092
E-mails	spsinghsanskrit@gmail.com

Witness 1:



Witness 2:

DR. MANOJ KUMAR  
Assistant Professor (Sanskrit)  
C.M.P. Degree College, Prayagraj, U.P.

Witness 3:

Dr. SATYA PRAKASH SRIVASTAVA  
Assistant Professor (Sanskrit)  
C.M.P. Degree College, Prayagraj, U.P.

Witness 4:

DR. VIJAY BAHADUR  
Assistant Professor (Sanskrit)  
C.M.P. Degree College, Prayagraj, U.P.



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## Three days inter-Collegiate competition

Department of Sanskrit conducts three days inter collegiate competition every year, in which many students of UG and PG of the various degree colleges and University take Participation. There are many competitions held like Shastrarth, Shalaka Pariksha on Srimadbhagavadgeeta, Shloka competition, General knowledge, Samuh Geet etc. On the third day the winners of the Shastrarth (UG and PG both) are awarded **Trivenika Gaurav Sammam** with angvastram, shreefal and certificates. More than 75 students participate in this event every year.

The winners are as follow-

### Session- 2019-20

Nitin Tripathi (UG)  
Bhaskar Mishra (PG)

### Session- 2020-21

Ritik Tripathi (UG)  
Rama Nupane (PG)

### Session- 2021-22

Divya Sri Tripathi (UG)  
Vimal Pathak (PG)

### Session- 2022-23

Krishna Bihari Dube (UG)  
Manish Kumar (PG)

## Shastrartha

It's an Ancient Rishi parampara based event, in which the Participant asks the questions with other participants and the cross questioning going on until the judges are satisfied. Thus, the participants get the true knowledge of that particular subject. In the end, the participant who satisfied everyone, declared as a winner. The winner is honoured with the prestigious **Trivenika Gaurav Samman** with Shreefal, Angvastram and certificate.



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Picture of the students and Faculty Members during shastrarth





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News coverage and winner students honored by various respected scholars



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**Group Photo Session on the occasion of Validictory Ceremony**



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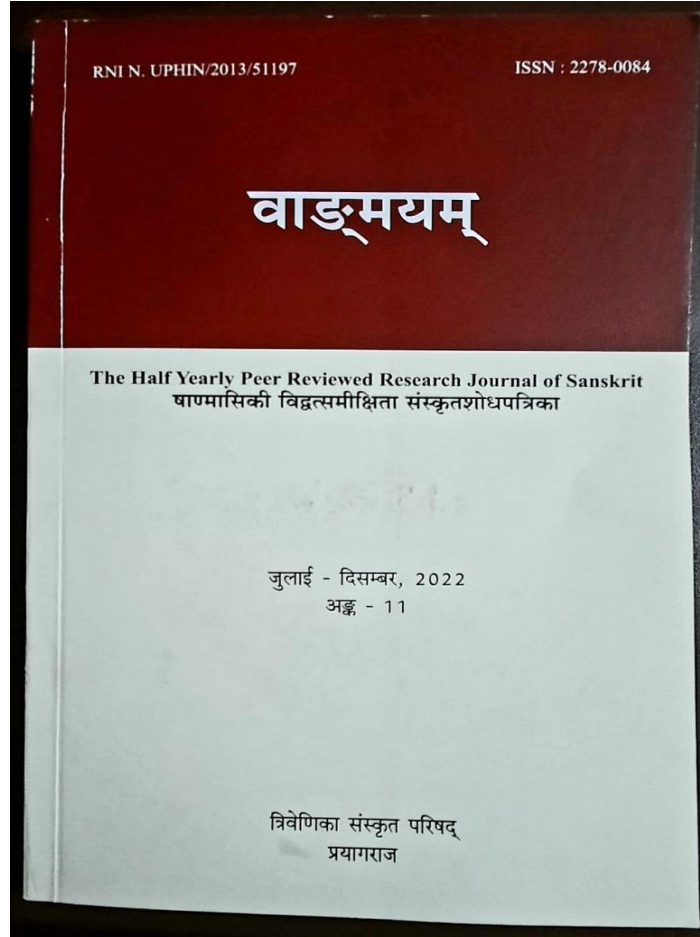


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## Publication of Research Journal

Department of Sanskrit, C.M.P. College publishes a Half yearly Peer Reviewed Research Journal of Sanskrit '**Vangmayam**' in order of its research activities, in which research papers written in Sanskrit, Hindi and English languages by various scholars from India and abroad are published. All the faculty members of the Sanskrit Department ensure the quality of the research journal in the form of an editorial board.



Departmental Research Journal



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## MEMORANDUM OF UNDERSTANDING

This Memorandum of Understanding (hereinafter referred to as the "MOU") is made and executed on this 7th day of August 2022 at Pune.

BETWEEN

Chowdhary Mahadev Prasad Degree (C. M.P.) College, a college/Institute recognized under Section 2(f) and 12 (B) of the UGC Act 1956 and having address at: Mahatma Gandhi Marg, George Town, Prayagraj, 211002, Uttar Pradesh, India

Through its Principal

(hereinafter referred to as "PARTNER INSTITUTE")



1





# चौधरी महादेव प्रसाद महाविद्यालय

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- iii. If for any reason, FINSERV, decides to discontinue support for CPBFI, it shall give a written notice to the PARTNER INSTITUTE, 30 days in advance. Such notice shall not impact any batch which is already in progress on the date of notice and the terms of this MOU shall continue to apply to the running batches.

#### 16. Amendment/Termination:

- i. Any amendment to the terms of this MOU can only be made by mutual consent of the parties.
- ii. This MOU may be terminated by either party, for breach of terms and conditions of the present MOU or otherwise, by a written notice of at least one (1) month in advance. Such notice of termination shall not interfere with the batches underway at the relevant time. Such batches shall be allowed to continue until their conclusion.
- iii. Both the parties agree that Finserv shall have the right of terminating this MOU without any notice to the PARTNER INSTITUTE, if the PARTNER INSTITUTE charges a fee exceeding the amount prescribed under Clause 6(i) of this MOU. In such event, the batches underway at the relevant time, may also be terminated by FINSERV, unless the PARTNER INSTITUTE refunds the excess fee charged to every student of the batch.

#### 17. Applicable Law and Dispute Settlement:

- i. This MOU shall be governed by the Laws of India.
- ii. Any dispute arising between the parties in connection with or arising out of the performance of mutual obligations under this MOU shall be resolved by mutual discussion and consultation. If the dispute remained unresolved even after 30 days, then the dispute shall be referred to the Principal of Chowdhary Mahadev Prasad Degree (C. M.P.)College and Mr. V. Rajagopalan, President (Legal and Taxation), Bajaj Finserv Limited. The decision of the principal of Chowdhary Mahadev Prasad Degree (C. M.P.)College and Mr. Rajagopalan shall be final and binding on both parties.

#### 18. Originals:

This MOU is executed in counterparts, each of which shall be deemed to be original and retained by each of the Parties but together they shall constitute one and the same MOU.

IN WITNESS WHEREOF, the Parties hereto have put their hands the day, month and the year first hereinabove mentioned

For Chowdhary Mahadev Prasad  
Degree (C. M.P.)College

For Bajaj Finance Limited

For Bajaj Finserv Limited

Name: Prof. Ajay Prakash Khare  
Designation: Principal

Name: V. Rajagopalan  
Designation: President (Legal and  
Taxation)

Name: V. Rajagopalan  
Designation: President (Legal and  
Taxation)

Witness  
Full Name: Dr. Bireshwar Pandey  
Designation: Assistant Professor

Witness  
Full Name: Ajay Sathe  
Designation: Group Head –  
Customer Experience and CSR

Witness  
Full Name: Ajay Sathe  
Designation: Group Head –  
Customer Experience and CSR





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## सर्टिफिकेट प्रोग्राम इन बैंकिंग फाइनेंस एंड इश्योरेंस (सीपीबीएफआई)

सर्टिफिकेट प्रोग्राम इन बैंकिंग फाइनेंस एंड इश्योरेंस (सीपीबीएफआई) जिसका संचालन संयुक्त रूप से बजाज फिनसर्व एवं सीएमपी कालेज के द्वारा किया जा रहा है। जिसके लिए सीएमपी कॉलेज एवं बजाज फिनसर्व में एक एमओयू भी हुआ है। जिसके तहत प्रथम बैच का प्रारंभ 10 सितंबर 2022 को किया गया जिसमें कुल 53 विद्यार्थियों ने प्रवेश लिया तथा यह बैच सफल रूप से 20 अक्टूबर 2022 को संपन्न हुआ जोकि हाइब्रिड मोड में अर्थात ऑनलाइन एवं ऑफलाइन दोनों मोड में संपन्न हुआ जिसके अंतर्गत बैंकिंग से संबंधित एवं बीमा से संबंधित तथा वित्तीय लेनदेन एवं गतिविधियों से संबंधित सभी प्रकार की जानकारियां विद्यार्थियों को प्रदान की गई।



Inaugural function of CPBFI course in the Department of Commerce



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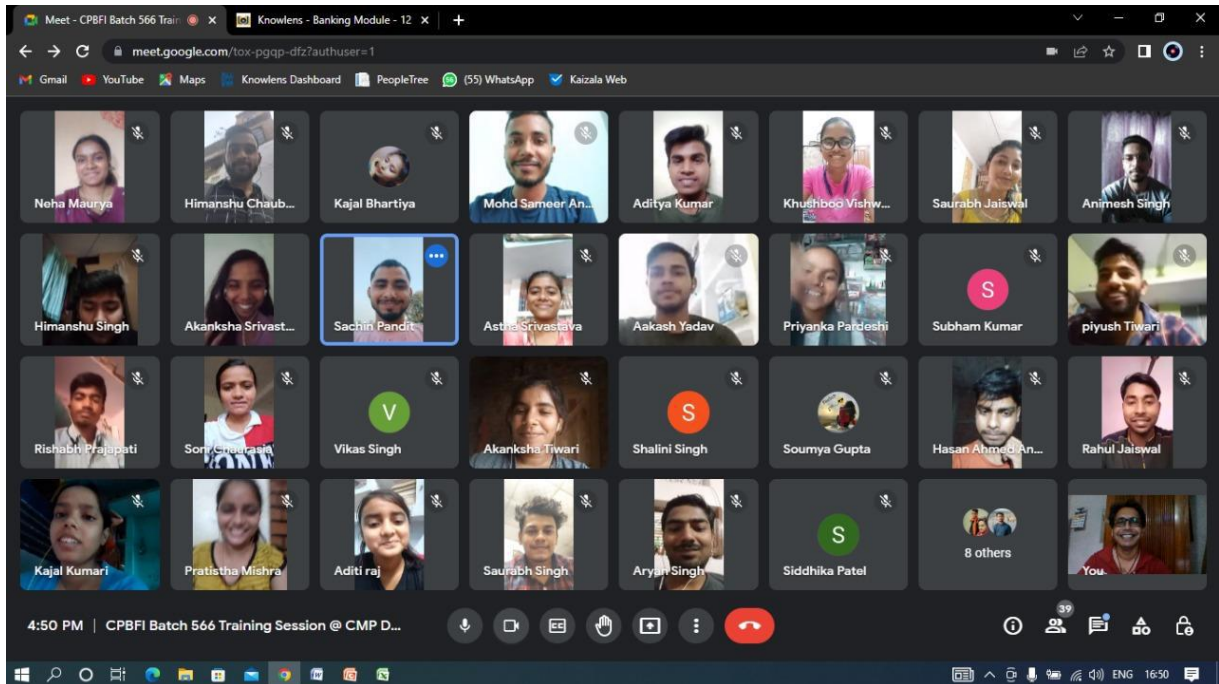
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Insurance class taken by Gyan Prakash Sir from Bajaj Finserv  
Online class



Online class taken by Abir Bhattacharya Sir from Bajaj Finserv



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Certificate distribution program to the student of CPBFI course



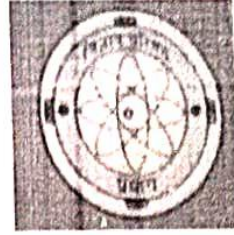


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## MEMORANDUM OF UNDERSTANDING

BETWEEN

CHAUDHARY MAHADEO PRASAD DEGREE COLLEGE, PRAYAGRAJ  
INDIA

&

VIJNANA PARISHAD PRAYAG, PRAYAGRAJ, INDIA

ON

PARTNERSHIP FOR JOINT CAPACITY BUILDING, KNOWLEDGE EXCHANGE  
PROGRAM AND INTER-INSTITUTIONAL ACTIVITIES



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## Authorized Signatories

Each party/ institution represents that the individuals signing this memorandum of understanding have the authority to sign on its behalf in the capacity indicated.

IN WITNESS whereof the undersigned, being duly authorized thereto, have on behalf of the parties hereto signed the present Memorandum of Understanding at the place and on the day stipulated below

Vijnana Parishad, Prayagraj

Chaudhary Mahadeo Prasad Degree College

Signature: S. G. Mishra

Signature: A. Prakash Khare

Name: Prof. Shiv Gopal Mishra

Name: Prof. Ajay Prakash Khare

Title: Pradhaanmantri

Title: Principal

Date: 29.11.2022

Date: 29.11.22



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## Report on one week FDP cum hands on training on “Neoteric Advancement in Nanotechnology”

### Day 1

The first day of the one week FDP cum hands on training workshop on “ Neoteric Advancement in Nanotechnology” organized by the Department of Chemistry under the aegis of DBT star scheme (13<sup>th</sup>-18<sup>th</sup> September,2023) commenced with the blessings of Prof. Ajay Prakash Khare, Principal, CMP Degree College. The inaugural session began with the ceremonial lighting of the lamp followed by the “Saraswati vandana” invoking the blessings of the goddess of wisdom and knowledge. The session was overseen by Dr. Monika Singh. The workshop was honored to have Prof. HP Tiwari, Ex. Vice Chancellor and Ex. Head, Department of Chemistry, University of Allahabad as the chief guest and Prof. Anchal Srivastava, Department of Physics, Institute of Science, BHU as the guest of honor and keynote speaker for the first session of workshop. Dr. Babita Agarwal extended a gracious welcome to all the guests and participants. Her welcoming remarks highlighted the significance of the workshop and its potential impact on the field of nanotechnology .Dr. Mridula Tripathi gave a brief introduction about the workshop. Dr. Deepanjali Pandey had the honor of introducing the guest of honor Prof. Anchal Srivastava. Her introduction shed light on the accomplishments and expertise of Prof. Srivastava. Presence of two esteemed personalities, Dr. Akhilesh Kumar, Assistant Professor, PBPG College, Pratapgarh and Dr. Rajiv Giri undeniably added a layer of depth and engagement to this workshop. It’s worth noting that the seminars success was further amplified by the impressive turnout of 250 participants.

Prof. Anchal Srivastava emphasized on the critical importance of nanotechnology in today’s world. He highlighted how nanotechnology has become an integral part of various industries, from medicine to electronics and how it has the potential to revolutionize our lives. Chief guest Prof. HP Tiwari shared insight into the development in the field and various ways in which these nanoparticles are being used as a drug deliver agents. Vice Principal Dr. Nita Sinha and Dr. Meena Rai also shared their thoughts on the same. The session ended with vote of thanks which was given by Dr. AK Shukla, he expressed gratitude to all those who contributed to the success of the inaugural session.

In the second session the keynote speaker was Dr. Ishan Pandey. He talked about the “Oncobiome”, how oncobiome affect cancer and gave future directions in oncobiome research. Chairperson Dr. Santosh Srivastava also shared his thoughts on the same. The session was overseen by Dr Deepanjali Pandey. The presence of large number of participants helped the session to end at a successful note.



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**The inaugural session of one week FDP cum hands on training on “Neoteric Advancement in Nanotechnology”**

## Report on FDP cum Hands-on Training Workshop on "Neoteric Advancement in Nanotechnology"

### Day 2

#### First Session

Second day of the workshop commenced with a warm welcome extended to the distinguished speakers, Prof. Ravindra Dhar Dwivedi, hailing from the Centre of Material Science in Prayagraj, and Professor Kumud Dubey, a senior scientist at IFRE-ERC, Prayagraj. The welcome gesture involved offering saplings to the speakers, courtesy of Dr. Gyan Prakash and Dr. Mridula Tripathi. Dr. Sunanda Das assumed the role of the session's chairperson, and the brief CVs of both invited speakers were eloquently presented by Dr. Ashok Kumar Ranjan and Dr. Praveen Tripathi.

The first segment of the session was led by Professor R. Dhar, who skillfully set a friendly and engaging tone for the audience. His presentation centered on the theme "Nanotechnology in Photovoltaic/Solar Energy." Professor Dhar discussed intriguing topics, such as the application of tulusi-coated silver nanoparticles in catalysis and other domains, emphasizing the inseparable relationship between science and technology. He elucidated how energy underpins all aspects of nature and how nanotechnology plays a pivotal role in enhancing the efficiency of batteries, a crucial energy-storage device. Furthermore, he highlighted the potential of organic semiconductor materials in revolutionizing the development of cost-effective and high-efficiency solar cells. Prof. Dhar also delved into the fascinating world of discotic liquid crystals (DLCs), elucidating their current applications in mobile displays, laptops, automobiles, watches, and more.



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The second speaker of the session, Professor Kumud Dubey, presented her insights on "Application of Nano Materials in Agriculture and Forestry." Her comprehensive lecture covered the fundamentals of nanotechnology and ventured into more advanced topics, notably carbon nanotubes, which are astoundingly 100 times stronger than steel yet six times lighter. Prof. Dubey underscored the wide-ranging applications of nanotechnology in environmental remediation, medicine, agriculture, and the economy. She shed light on how nanotechnology can revolutionize crop improvement, crop protection, stress tolerance, and precision farming through the use of bio-nanocomposites, nanotubes, and other innovative approaches.

The session was expertly hosted by Dr. Pramod Sharma, and Dr. Sunanda Das delivered a heartfelt vote of thanks to conclude the proceedings. Dr. Monika Singh and Dr. Deepanjali Pandey served as the rapporteurs for the session, diligently documenting the valuable insights and discussions shared by the speakers.

### Second Session

The second session of Day 2 commenced with an enlightening presentation by Dr. Priyanka Chawla, a distinguished research associate from CMP Degree College. Dr. Chawla's presentation focused on the captivating subject of "Dye-Sensitized Solar Cells" (DSSCs), providing an additional layer of depth to the workshop's exploration of advanced nanotechnology applications.

Following Dr. Chawla's insightful presentation, the workshop provided a platform for students and research scholars to showcase their own work. A total of 20 participants eagerly seized this opportunity to present their research findings and innovative ideas, contributing to the overall richness of the workshop.

To evaluate and acknowledge the efforts of these young scholars, a panel of three esteemed judges, namely Dr. Deepa Srivastava, Dr. Praveen Tripathi, and Dr. Amita Pandey, meticulously assessed the presentations. In a gesture of encouragement and appreciation, Dr. Babita Agarwal and Dr. Mridula Tripathi extended their warm wishes to the participating students for their active and enthusiastic engagement in the workshop. Their words of encouragement further motivated the students and research scholars to continue their pursuit of excellence in the field of nanotechnology.



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Lectures deliver on the theme "Nanotechnology in Photovoltaic/Solar Energy." By our Speakers

Report on FDP cum Hands-on Training Workshop on "Neoteric Advancement in Nanotechnology"

Day 3

**First Session:**

The third day of the workshop was marked by a stimulating and informative first session, featuring three distinguished invited speakers who illuminated various facets of nanotechnology: Dr. Rajeev Giri, Assistant Professor, Centre of Material Science, University of Allahabad. Dr. Archana Pandey, Associate Professor, Department of Chemistry, CMP Degree College and Dr. Simant Srivastava, Assistant Professor, Department of Chemistry, University of Allahabad.

The session commenced with a warm and respectful welcome extended to the esteemed guests. This welcome was symbolized by the presentation of saplings, representing growth and knowledge, thoughtfully offered by Dr. Babita Agarwal, Dr. Mridula Tripathi, and Dr. Deepanjali Pandey. Dr. Deepanjali Pandey also shared the full CV of the first speaker, Dr. Rajeev Giri, highlighting his significant contributions to the field of nanotechnology. Dr. Rajeev Giri gave a captivating presentation centered on the theme "Nanomaterials: Synthesis and Applications". Dr. Giri provided valuable insights into carbon nanotubes, categorizing them and emphasizing their critical role in nanotechnology. He also shed light on the emerging field of carbon quantum dots, elucidating their unique properties and potential applications. In recognition of his informative presentation, Dr. Arti Gupta presented Dr. Rajeev Giri with a memento as a token of respect and appreciation on behalf of the workshop.



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Dr. Archana Pandey, the second speaker of the session, brought a new dimension to the discussion with her presentation on the intriguing topic "Tan aur Mann Ka Rasayan Vigyan" (Chemistry of Body and Mind). In her presentation, she highlighted the pivotal role played by various hormones produced within the human body. Some of these hormones included serotonin, dopamine, cortisol, melatonin, and others, which she discussed in detail. In recognition of her insightful discourse, Dr. Sarita Srivastava, Dr. Babita Agarwal, and Dr. Mridula Tripathi jointly presented her with a memento as a gesture of appreciation.

Dr. Simant Srivastava, the third and final speaker of the session was introduced by Dr. Akram Ali. Dr. Simant Srivastava enlightened the audience with his presentation on "Synthesis, Characterization, and Application of Nanomaterials." He delved into the fundamentals of nanomaterials and explored techniques such as sol-gel processes, preparation methods for thin films via spin-coating, X-ray diffraction techniques, and photocatalytic applications. Dr. AK Shukla had the honor of presenting a memento to Dr. Simant Srivastava in recognition of his informative and enlightening presentation.

### Second Session:

The second session of the day was a highly anticipated laboratory visit to the Centre of Material Science, University of Allahabad. This visit provided an opportunity for participants to engage with laboratory instruments and gain practical insights into the field of nanotechnology. The participants were accompanied by Dr. AK Shukla, Dr. Babita Agarwal, Dr. Monika Singh, Dr. DK Sahu and Dr. Priyanka Chawla. During the lab visit, participants had the privilege of exploring a range of sophisticated instruments that are instrumental in nanotechnology research. These instruments included: X-Ray Diffraction (XRD), Fourier Transform Infrared Spectroscopy (FTIR), UV-Visible Spectrophotometer, Pressure Differential Scanning Calorimeter (PDSC), Pressure Light Microscope (PLM) or Pressure Optical Microscope (POM.) This hands-on experience provided a unique opportunity for participants to bridge the gap between theoretical knowledge and practical application in the field of nanotechnology. The workshop organizers are grateful to the Centre of Material Science, University of Allahabad, for opening their doors and facilitating this enriching laboratory visit.



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## Laboratory visit to the Centre of Material Science, University of Allahabad

### Report on FDP cum Hands-on Training Workshop on "Neoteric Advancement in Nanotechnology"

#### Day 4

##### First Session:

The fourth day of the workshop was marked by a stimulating and informative first session, featuring two distinguished invited speakers who illuminated various facets of HPTLC: Mr. Mohit Upadhyay, Application Chemist and Anchrom Enterprises. Dr. Santosh Srivastava Associate professor, Department of Chemistry, C.M.P. Degree College

The session commenced with a warm and respectful welcome extended to the esteemed guests. This welcome was symbolized by the presentation of saplings, representing growth and knowledge, thoughtfully offered by Dr. Deepanjali Pandey, Dr. Babita Agarwal and Dr. Vishal Srivastava. Dr. Vishal Srivastava also shared the full CV of the first speaker, Mr. Mohit Upadhyay, highlighting his significant contributions to the field of High Performance Thin Layer Chromatography (HPTLC). Mr. Upadhyay gave a captivating presentation centered on the theme "High Performance Thin Layer Chromatography". Mr. Upadhyay gave insightful explanations of how various instruments function according to different features and demonstrated through video how HPTLC operates. He also discusses difference between Thin Layer Chromatography (TLC) & High Performance Thin Layer Chromatography (HPTLC). He also shed light on the emerging field of pharmaceutical, elucidating their unique properties and potential





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applications. In recognition of his informative presentation, Dr. Sunanda Das sapling to a speaker Mr. Mohit Upadhyay to presented and certificate.

Dr. Santosh Srivastava, the second speaker of the session, brought a new dimension to the discussion with his presentation on the intriguing Theme: “Millets: A Superfood or a Diet Fad. Dr. Srivastava gave us information about millets and why it is so important for our daily diet and health. Dr. Srivastava also told that they can be easily cultivated or cultivated ever in different condition can be produced and also told what kind of nutrition we get from it. In recognition of his informative presentation, speaker Dr. Santosh Srivastava was honored by Dr. Monika Singh with a sapling and Dr. Babita Agrawal honored by giving certificate.

The session was expertly hosted by Dr. Deepanjali Pandey and Dr. Meena Rai delivered a heartfelt vote of thanks to conclude the proceedings. Dr. Meena Rai thanked Mr. Upadhyay for his expertise presentation about HPTLC. Dr. Meena Rai thanked Dr. Santosh Srivastava for sharing information about benefits of millets and in the end Dr. Meena said that a will come when we will take care of nature will return again.

### Second Session:

Inaugurating the second session, Dr. Babita Agarwal called Ritu Ravi and Nivedita Srivastava for hosting. While starting the hosting, she welcomes everyone with great warmly and took the program forward. A total of 15 participants eagerly sized this opportunity to present their research finding and innovative ideas, contributing to the overall richness of the workshop. To evaluate and acknowledge the efforts of these young scholars, a panel of six esteemed judges, namely Dr. Monika Singh, Dr. Vishal Srivastava, Dr. Dharmendra Kumar Sahu, Dr. Deepanjali Pandey, Dr. Ashok Kumar Ranjan and Dr. Pramod Kumar, meticulously assessed the presentation. Dr. Vishal Srivastava, Dr. Mridula Tripathi, and Dr. Babita Agarwal made a gesture of support and appreciation. The end of the second session, Dr. Vishal Srivastava concludes the student session with some warm wishes to the entire presenter and inspired to come forward and take part into various program where all the P.G. students and research scholars explore their self and gain knowledge from these kind of workshops which help to buildup confidence and their communication skills.



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**Students Interacting Session with Guest Speakers and Presentation Session by Research Scholar**

**Report on FDP cum Hands-on Training Workshop on "Neoteric Advancement in Nanotechnology"**

**Day 5**

**First Session:**

The last day of the workshop was marked by a stimulating and informative first session, featuring One distinguished invited speakers who illuminated facets of Water literacy: Dr. Pramod Kumar Sharma Assistant professor, Department of Chemistry, C.M.P. Degree College

The session commenced with a warm and respectful welcome extended to the esteemed guests and Dr. Arti Gupta chaired this session. This welcome was symbolized by the presentation of saplings, representing growth and knowledge, thoughtfully offered by Dr. Deepanjali Pandey, Dr. Babita Agarwal and Dr. Jaya Srivastava. Dr. Jaya Srivastava also shared the full CV of the first speaker, Dr. Pramod Kumar and called him "Ganga Putra", highlighting his significant contributions to the field of "Water Management". Dr. Pramod explained the significance of water in our daily lives. He discussed alarming concern about whether safe water will be available for drinking in the future observing the current water deficit. He also gave information about water literacy course which he runs to spread awareness about water conservation among the next generation. In recognition of his informative presentation, Dr. Babita Agarwal honored the speaker Dr. Pramod Kumar by given sapling and certificate. Dr. Arti Gupta shared some experience related to water crisis in different part of India and encourage the participants for water conservation



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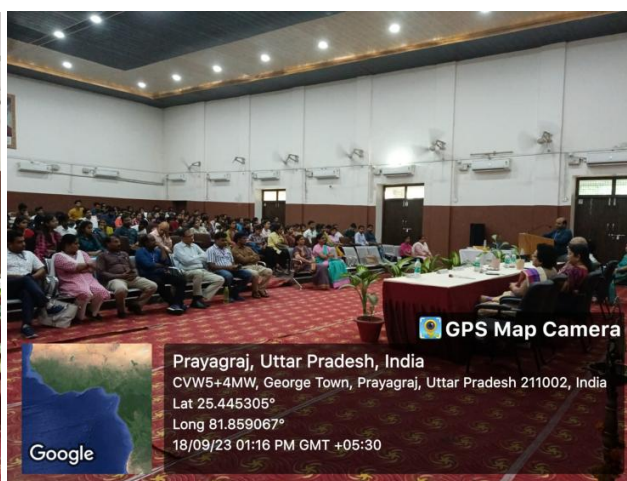
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At last of first session feedback from various participant was taken they were given an opportunity to express their feelings and knowledge which they have gained during this six days of workshop.

## Valedictory Session:

Starting the second session of the last day of the one week workshop program, whole anchoring by Dr. Monika Singh welcomed her chief guest Prof. I.R.Siddiqui, head of the Department of Chemistry was a chief guest of the session. The dies inlighted by the presence of Prof. Ajay Prakash Khare principal of C.M.P.Degree College. Prof. Khare honored the chief guest by presenting him sapling. Taking everything forward Dr. Vishal Srivastava presented the report of the one week workshop program in a systematic manner. Dr. Babita Agarwal gave the welcoming the chief guest principal sir, faculty members and participant. Prof. Khare blessed participant with his encouraging words his said that nanotechnology has various scope to explore and he appreciated organizing committee for providing platform to be student foe learning this new technology. While taking about nanotechnology. Prof. Siddiqui also told about is special area such as Drug delivery, nano materials etc. Prof. I.R. Siddiqui delivered Captivating speech who nanotechnology is involved in our life and he also inlighted the participant by giving information about different field of nanotechnology such as drug delivery, Nanomaterial etc. Dr. Sarita Srivastava discuss about the benefits of the one week workshop. Dr. Meena Rai conclude the workshop and Dr. Mridula Tripathi thanked the chief guest, speaker resource persons, organizing committee of the workshop and participant.



## Valedictory Session



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## MEMORANDUM OF UNDERSTANDING (MOU)

Memorandum of Understanding (MOU) between the Artifactual Archaeological Sciences Society (AASS), Prayagraj and the C.M.P. Degree College (CMPDC), Central University of Allahabad, Prayagraj.

### PREAMBLE

The Artifactual Archaeological Sciences Society (AASS), Prayagraj and the C.M.P. Degree College (CMPDC), Prayagraj, hereinafter called the 'Partners', find it mutually beneficial to have a formal understanding for academic and research-oriented collaboration between them.

Based on mutual co-operation and understanding, the Partners shall resort to collaborative academic and research activities through exchange of knowledge and expertise in the field of Humanities and social sciences.

### Partners to the Memorandum

The partners to this Memorandum of Understanding are the C.M.P. Degree College, Prayagraj represented by Professor Ajay Prakash Khare, Principal of the CMPDC or his nominee on one side, and Professor Prakash Sinha (Retd.), President, the Artifactual Archaeological Sciences Society (AASS), Prayagraj or his nominee, on the other.

### Details of Understanding

1. The AASS may conduct academic and research activities using the infrastructure of the CMPDC.
2. The CMPDC will provide the AASS access to Library and e-library facilities including the Inffibnet.
3. The AASS may assist research students and faculty of the CMPDC in research related activities.
4. Students and faculty members of the CMPDC may get internship at the AASS.
5. The AASS may help in co-curricular activities of the CMPDC as a part of the NEP-2020 for which the expenses will be borne by the CMPDC.
6. The CMPDC and AASS may jointly organise seminars, workshops, conferences, book launches etc.
7. Both the partners can undertake any other academic activity with mutual consent.

### Date of Effect


The MOU between the two Partners will take effect from the date of signature and will remain in force unless terminated by one party on a three months' notice.

### Modifications

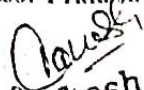
The MOU may be amended by mutual consent of the two partners.

Signed on the Twenty Sixth day of September 2022.

Professor Ajay Prakash Khare

  
Principal  
C.M.P. DEGREE COLLEGE  
PRAYAGRAJ

Professor Prakash Sinha (Retd.)

  
Prakash Sinha  
Ancient History,  
Culture & Archaeology  
University of Allahabad,  
Allahabad 211002

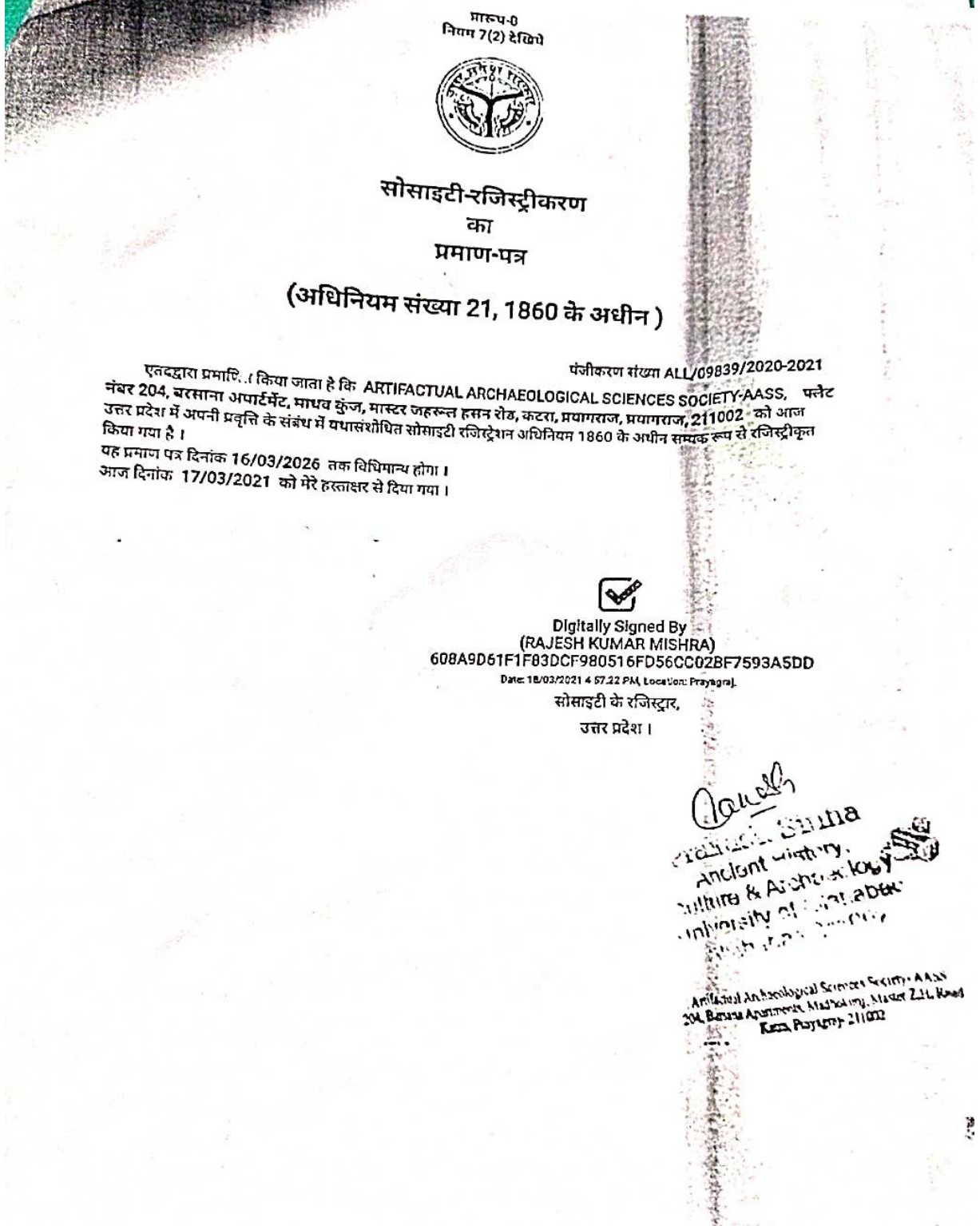


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On 27<sup>th</sup> Sep 2022, Inaugural Session of Intellectual Advancement Cell Program



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Student Interaction Session with Program Person



Intellectual Advancement Cell Organized an Exhibition of Archaeological Monuments for the Students



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## MEMORANDUM OF UNDERSTANDING

BETWEEN

CHAUDHARY MAHADEO PRASAD DEGREE COLLEGE PRAYAGRAJ,  
INDIA

AND

MAGSTIK PRIVATE LIMITED, DELHI, INDIA

ON

PARTNERSHIP FOR JOINT CAPACITY BUILDING, RESEARCH AND  
LABORATORY FACILITIES





# चौधरी महादेव प्रसाद महाविद्यालय C. M. P. DEGREE COLLEGE

(A Constituent P.G. College, University of Allahabad)

Under the Strengthening Component of DBT Star College Scheme

Website: [www.cmpcollege.ac.in](http://www.cmpcollege.ac.in)



## ARTICLE -8

8.1 The tenure of the MOU shall be for two years from the date of signing the MOU. Unless opted otherwise by either of the signatory parties to this MOU, the tenure shall be renewed automatically for another three years from the date of expiry of the first tenure.

In witness whereof the undersigned, duly authorized thereto, have signed this MOU on this day,  
18 June 2022

## Authorized Signatories

Each party/ institution represents that the individuals signing this memorandum of understanding have the authority to sign on its behalf in the capacity indicated.

IN WITNESS whereof the undersigned, being duly authorized thereto, have on behalf of the parties hereto signed the present Memorandum of Understanding at the place and on the day stipulated below

Magstik Private Limited, India

Chaudhary Mahadev Prasad Degree College

Signature: शिव कुमारी 40525

Name: Ms. Shiv Kumari Pandey

Title: Managing Director

Date: 15.06.2022

Signature: [Handwritten Signature]  
Name: Dr. A. P. KHARE  
Title: Principal PRAYAGRAJ

Date: 17/6/22



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Department of botany has an MOU with Magstik India pvt Ltd where the Magstik India in collaboration with CCMB is trying to cultivate a Low glyceamic index rice Variety Sona Masuri Sambha variety. The consultancy for growing the rice variety was provided by Faculty of Botany Department and the Research scholars were helping in seed distribution and seed treatment. Magstik India also paid monthly consultancy fee to Mr Suresh Kumar @Rs 5000/-pm for a period of six months i.e June 2022-December 2022.

S. N o.	Activity	Pictures
1.	Mr Suresh Kumar addressing the farmers at Deoria providing consultancy for benefits of Low glyceamic index rice variety	
2.	Distribution of Rice Seeds to the farmers	



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3.	Media coverage of Seed distribution in local news paper of Deoria	<p><b>सम्भा धान का बीज निशुल्क मिलने से किसानों में खुशी की लहर</b></p> <p>बरहज / देवरिया (राष्ट्र की परम्परा)। विकासशील किसान कृषि प्रोड्यूसर कंपनी एफपीओ के कार्यालय पर मैजेस्टिक एवं टाटा इंस्टिट्यूट ऑफ जेनेटिक सोसाइटी के सहयोग से ग्राम सभा मिर्जापुर एवं महुईकुंवर एवं मोहाव के किसानों को ट्रायल के रूप में 30 एकड़ खेत के लिए 3 कुंतल सांभा धान का बीज निशुल्क कंपनी के डायरेक्टर ज्ञानेश्वर सिंह एवं सुरेश कुमार शोध वैज्ञानिक द्वारा क्षेत्र के किसानों में वितरित किया गया और सम्भा बीज पाकर किसानों के चेहरे खुशी से खिल उठे, शोध वैज्ञानिक सुरेश कुमार ने बताया कि इस बीज में नाम मात्र का शुगर पाया जाता है इसका चावल शुगर वाले व्यक्ति के लिए बहुत लाभकारी सिद्ध हुआ है।</p>



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		<p>किसानों में निशुल्क सांभा धान बीज वितरित</p> <p>बरहज (एसएनबी)। विकासशील किसान प्रोड्यूसर कम्पनी एफ़वीओ कार्यालय पर मैजिस्टिक एवं डाटा इन्स्टीच्यूट के सहयोग से ग्राम मिर्जापुर, महुँकुंवर एवं महोबा के किसानों को ट्रैक्टर के रूप में 30 एकड़ खेत के लिए 3 कुन्तल सांभा धान का बीज निःशुल्क कम्पनी के डायरेक्टर रामेश्वर सिंह, सुरेश कुमार रोष वैज्ञानिक द्वारा क्षेत्र के किसानों में वितरित किया गया। जिनमें नाम मात्र का सुगर पाया जाता है। इसका खाल सुगर खाले ज्वलित के लिए बहुत ही लाभकारी सिद्ध हुआ है। उक्त बातें सुरेश कुमार ने कहीं। भीमसेन ने कहा कि किसान अधिक से अधिक अपने खेतों में जैतिक खाद का प्रयोग करें। सुधीर सिंह ने किसानों द्वारा उक्त उत्पादन को एमएससी मूल्य से अधिक दाम पर खरीदारी करने का अनुरोध दिया ताकि किसानों को आय दोगुना हो सके। विजय कुमार सिंह, राममिलन सिंह, अर्जुन जयसवाल, प्रल्हाद खटव, चिन्तामणि सहानी, रामजी राय, उदयप्रताप लाल, साहू प्रभुकाव, मुन्नालाल आदि मौजूद रहे।</p> <p>प्रगतिशील किसानों का संवाद सम्मान कार्यक्रम 5 को</p> <p>सलेमपुर (एसएनबी)। भाजपा किसान मोर्चा देवरिया द्वारा केन्द्र सरकार के 8 वर्ष पूरे होने पर आगामी 5 जून को तालाब स्वच्छता और पौधरोपण कार्यक्रम का सलेमपुर विधानसभा के सुरिया नदीतीरे और बावनपल्ली ब्यँसदेव में किया गया है, जिसके तहत सलेमपुर विधानसभा के 100 प्रगतिशील किसानों से संवाद करके उनको सम्मानित किया जायेगा। सलेमपुर विधानसभा में आयोजित इस कार्यक्रम में उत्तर प्रदेश सरकार की मंत्री विजय लक्ष्मी गौतम के साथ स्वर्गीय भाजपा नेता तालाब स्वच्छता के साधनोपल का पीछा लगाकर प्रगतिशील किसान भाईयों से संवाद करके उनको सम्मानित करेंगे। भाजपा किसान मोर्चा के इस कार्यक्रम को सफल बनाने के लिए किसान मोर्चा के राजनीकांत सिंह और सायप्रकाश सिंह को संयोजक बनाया गया है।</p>
3.	Rice varieties grown in fields of Deoria under the supervision of Botany Department of CMP Degree College and Magstik India pvt LTD	



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4.	Providing rice seeds after Seed treatment with organic formulation to grow disease free variety on pilot scale cultivation under trial in deoria	



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5.	Farmers visit with magstic founder Dr. Saurabh Pandey	



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6.	Farmers day celebration on 24 <sup>th</sup> December 2022 at Deoria with Director Magstik and Faculty from CMP Degree College Dr. Deepak Kumar Gond and Research Scholar Mr. Suresh Kumar	

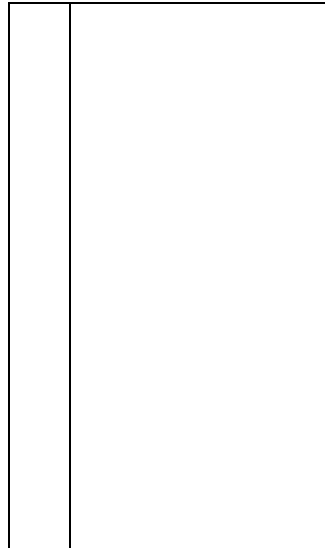


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Dr Deepak Kumar Gond addressing the Farmers in Deoria for cultivation of Low glycemic index rice variety developed in joint collaboration with CCMB, Magstik and CMP DEgre College







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Team of Magstik  
Dr Saurabh  
Pandey, Dr.  
Rakesh Mishra  
(former director  
CCMB,  
Hyderabad) and  
research scholars  
from CMP  
DegreeCollege Mr  
Suresh Kumar  
and Mr  
Pushpendra  
Yadav along with  
DR Deepak Gond  
on the field visit  
to deoria in  
December 2022





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MOU between CMPDC & UCER



## MEMORANDUM OF UNDERSTANDING

BETWEEN

DEPARTMENT OF CHEMISTRY

CHAUDHARY MAHADEO PRASAD DEGREE COLLEGE, PRAYAGRAJ

INDIA

&

UNITED COLLEGE OF ENGINEERING & RESEARCH, PRAYAGRAJ, INDIA

ON

PARTNERSHIP FOR JOINT CAPACITY BUILDING, KNOWLEDGE EXCHANGE

PROGRAM AND RESEARCH COLLABORATION



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MOU between CMPDC & UCER

## 8. APPROVAL

In agreement with the above terms of participation, the authorized representatives of the Department of Chemistry, C.M.P. Degree College (Prayagraj) and United College of Engineering and Research (Prayagraj) hereby affix their signatures.

*A.P. Khare*  
18.11.22

Prof. A.P. Khare  
Principal  
C.M.P. Degree College  
Prayagraj



United College of Engineering and Research  
Prayagraj





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RSC Advances

PAPER

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## Visible light-induced photoredox catalyzed C–N coupling of amides with alcohols†

Cite this: *RSC Adv.*, 2022, 12, 35221

Shraddha Tivari,<sup>a</sup> Pravin K. Singh,<sup>a</sup> Praveen P. Singh<sup>b</sup> and Vishal Srivastava<sup>b\*</sup>

Received 7th November 2022  
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DOI: 10.1039/d2ra07065k

[rsc.li/rsc-advances](https://doi.org/10.1039/d2ra07065k)

A visible-light-mediated method for the construction of *N*-monoalkylated products from easily available benzamides and benzyl alcohol in the presence of eosin Y has been developed. The reaction proceeded smoothly, for a wide range of derivatives of benzamides and benzyl alcohols, to give the desired products in good to excellent yields. Biological studies, such as those on drug-likeness and molecular docking, are carried out on the molecules.

### 1. Introduction

Organic compounds containing nitrogen are the most important in pharmaceutical molecules and agricultural chemicals. The basic building blocks of life, such as proteins, DNA, and RNA, are nitrogen-containing organic structural units. C–N bonds are found in more than 80% of commonly used medications. In current synthetic chemistry, green and mild methodology for preparing different C–N bonds to replace old harsh preparation protocols is always a hotspot.<sup>1</sup> The technique of *N*-alkylation of amides is well-known, efficient, and essential in the synthesis of natural products, polymers, and peptides.<sup>2,4</sup> Alcohols would be an appropriate option as alkylating reagents for the production of C–N bonds from a green chemistry perspective.<sup>5–8</sup> When compared to other reagents used for *N*-alkylation of amides, alcohols are widely available and relatively inexpensive. *N*-Monoalkylated product is a versatile building block that is commonly utilized in the production of many bioactive compounds<sup>9–17</sup> and pharmaceuticals (Fig. 1).

They are also generally non- or less-toxic and easier to handle. Alcohols, on the other hand, have a poor electrophilicity, required either harsh conditions or further processes. These reactions usually required higher temperatures and/or catalyst loadings, because amides are less nucleophilic than amines. In 2009, Fujita and co-workers developed a method for *N*-alkylation of amides with alcohols using iridium catalysts.<sup>18</sup> Watanabe and Jenner<sup>19,20</sup> and some other researcher<sup>21,22</sup> reported successful use of alcohols as alkylating reagents in the *N*-alkylation of amides using ruthenium and rhodium catalysts at high temperatures. Dean and co-workers reported *N*-

alkylation of amides with alcohols utilizing heterogeneous Ag/Mo oxides in 2011.<sup>23</sup> Alcohols were also reported as alkylating reagents in *N*-alkylation catalyzed by copper,<sup>24</sup> ruthenium,<sup>25</sup> and iridium catalysts<sup>26</sup> in the same year. Sun and co-workers<sup>27</sup> used ruthenium/iridium dual catalyst systems for the alkylation of aldoximes with alcohols to produce *N*-monoalkylated amide. Transition metal based photocatalysts, such as iridium, ruthenium, and polypyridyl complexes, on the other hand, have been associated with numerous disadvantages, including high cost, low sustainability, and low toughness, possibility of toxicity, as well as being inconvenient during separation.<sup>28–30</sup>

In response to visible light stimulation, the photochemistry of eosin Y has been extensively studied, and it has been discovered that eosin Y undergoes rapid intersystem crossing to the lowest energy triplet state.<sup>31,32</sup> Metal-free organic dyes, particularly eosin Y, were used instead of metal-based photoredox catalysts because they are more cost-effective and environment friendly.<sup>33,34</sup> Visible-light mediated photoredox catalysis for single electron transfer (SET) has emerged in recent years as a viable, versatile, cost-effective, and eco-friendly method for essential chemical transformations such

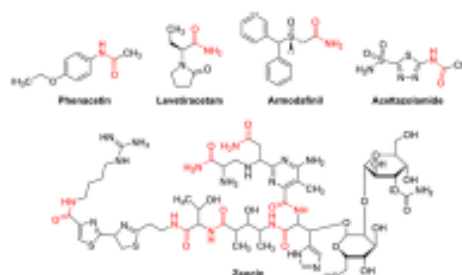


Fig. 1 Some commercially available amide drugs.

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† Electronic supplementary information (ESI) available. See DOI: [10.1039/d2ra07065k](https://doi.org/10.1039/d2ra07065k)





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ORIGINAL SCIENTIFIC PAPER



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## Visible-light Driven Eosin Y Catalyzed C(sp<sup>2</sup>)-H Functionalization/C–O Bond Formation for Synthesis of Benzoxazoles

Mangla Mishra,<sup>1</sup> Vishal Srivastava,<sup>2</sup> Pravin K. Singh,<sup>2</sup> Praveen P. Singh<sup>1,\*,†</sup>

<sup>1</sup> Department of Chemistry, Faculty of Sciences, United University, Prayagraj, U.P. -211012, India

<sup>2</sup> Department of Chemistry, CMP Degree College, University of Allahabad, Prayagraj, U.P.-211002, India

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RECEIVED: October 5, 2022 ★ REVISED: November 14, 2022 ★ ACCEPTED: November 21, 2022

**Abstract:** Visible light mediated synthesis of benzoxazoles from benzanilides under an air atmosphere at room temperature is reported using eosin Y as an organophotoredox catalyst by functionalization of C–H/C–O bond formation. This methodology accepts a broad range of functional groups and affords the benzoxazoles by transition-metal-free organic photoredox catalysis under very mild conditions.

**Keywords:** visible light, eosin Y, photocatalyst, heterocycle, benzoxazoles.

### INTRODUCTION

THE functionalization of C–H bond has been considered as a sustainable and innovative method for molecular synthesis.<sup>[1]</sup> The formation of C–O bonds has received less attention from inert C–H bonds than the well-established C–C and C–N bond building methods.<sup>[2]</sup> This is caused in part by the absurdly high energy barrier between the frontier orbitals of the M–O HOMO and M–C LUMO atomic systems.<sup>[3]</sup> The C–H functionalization/C–O bond formation technique that is operationally straightforward, effective, and feasible is still very much preferred.<sup>[4]</sup>

The development of feasible and efficient methods for the synthesis of benzoxazoles is garnering a huge amount of attention. Among the most significant heterocyclic rings, benzoxazoles are widely present in natural products, advanced materials, pharmaceuticals, and biologically active compounds.<sup>[5–6]</sup> Because of the diverse range of pharmacological effects that benzoxazoles exhibit, such as antibacterial,<sup>[7]</sup> antifungal,<sup>[8]</sup> anticancer,<sup>[9–11]</sup> anti-inflammatory,<sup>[12]</sup> anti-mycobacterial,<sup>[13]</sup> antihistamine,<sup>[14]</sup> anti-parkinson,<sup>[15]</sup> inhibition of hepatitis C virus,<sup>[16]</sup> 3-HT3 antagonistic effect,<sup>[17]</sup> melatonin receptor antagonism,<sup>[18]</sup>

amyloidogenesis inhibition<sup>[19]</sup> and Rho-kinase inhibition.<sup>[20]</sup> There are many commercially available drugs using benzoxazole as the main active component, including non-steroidal anti-inflammatory drug (NSAID) flunoxaprofen, benoxaprofen, antibiotic calcimycin, antibacterial boxazomycin B, muscle relaxant chlorzoxazone. Furthermore, the isolated benzoxazole alkaloids<sup>[21–24]</sup> from marine sponges or plants have strong medicinal activity. (Figure 1)

Among all of the various protocols to synthesise benzoxazole, direct C(sp<sup>2</sup>)-H activation using UV or visible light to produce intramolecular C–O bonds have recently attracted increasing attention.<sup>[25–34]</sup> Because solar energy (visible light) is pure, simple to utilise, and an endless energy source, there are many opportunities for the creation of environmentally beneficial and sustainable protocols for organic synthesis.<sup>[35–42]</sup> The conversion of solar energy into chemical energy for chemical reactions is the focus of several trailblazing researchers,<sup>[41,42]</sup> who have also developed a promising method for using photoredox catalysts to start single electron transfer (SET) processes.<sup>[43–45]</sup> Recently, a superior alternative to transition metal<sup>[46,47]</sup> photoredox catalysts, especially metal-free organic dyes such as eosin Y, fluorescein, rose bengal, nile red, perylene