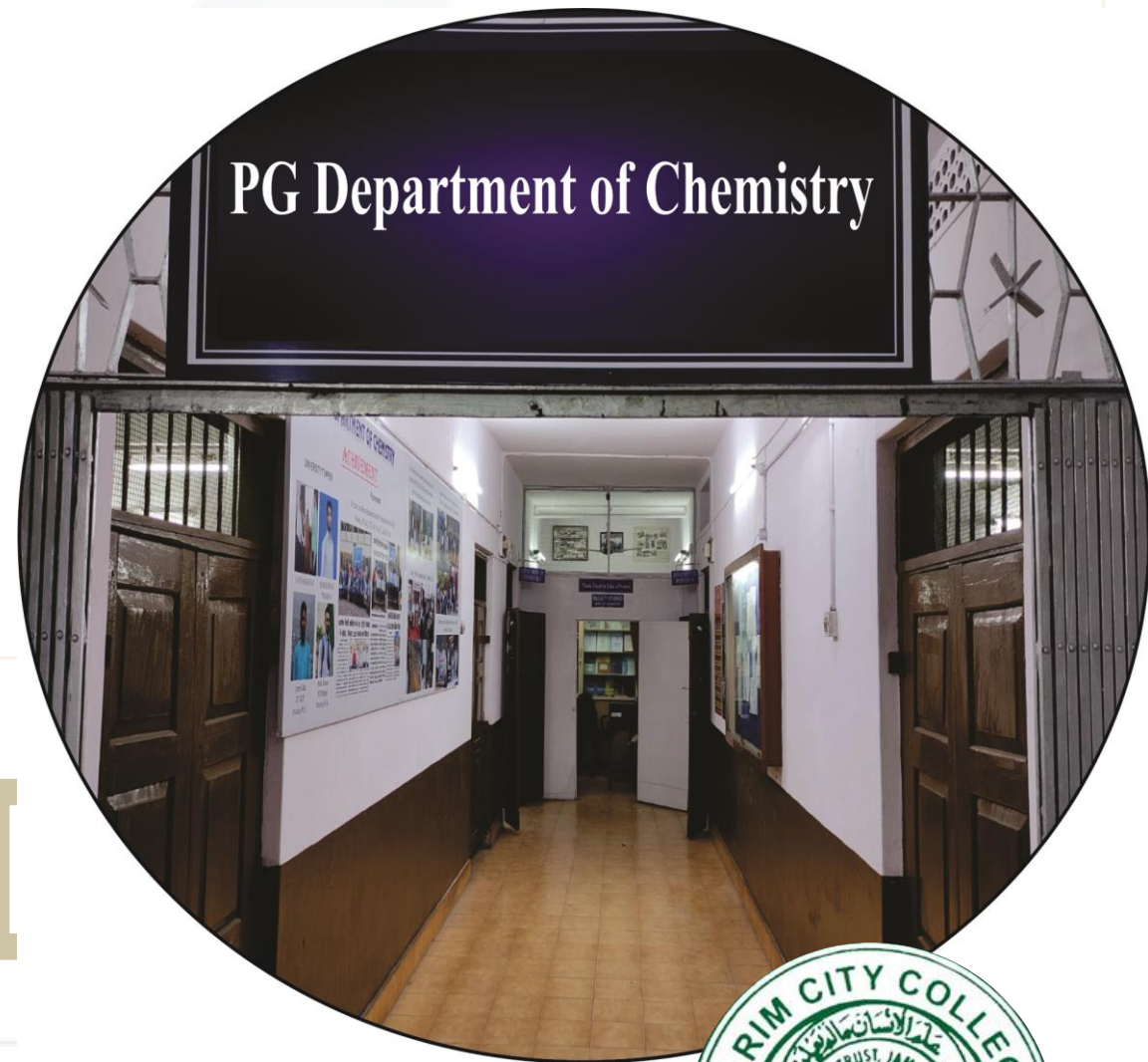




WEL COME
TO
NAAC PEER TEAM



PG DEPARTMENT OF CHEMISTRY
KARIM CITY COLLEGE, JAMSHEDPUR





OVERVIEW

- **Introduction**
- **Vision & Mission**
- **Faculty Introduction**
- **Achievement By Faculty Member**
- **Programme Outcome**
- **Course Structure / Outcome**
- **Result Of Final Year Students**
- **Measures Taken For Slow & Advance Learners**
- **Students Achievements**
- **Achievement of the Department**
- **Departmental Activities**
- **Infrastructure Facilities**
- **Best Practices**
- **Future Plan**

INTRODUCTION

Post Graduate Department of chemistry is one of the premier constituent department in the faculty of science in Karim City College, Jamshedpur, affiliated to Kolhan University, Chaibasa. Chemistry department was established in 1978 in Karim City College under the leadership of Dr. Mohammad Zakaria.

YEAR OF ESTABLISHMENT:

NAMES OF PROGRAMMES :

UNDER GRADUATE - 1978

POST GRADUATE PROGRAMME- 2020



Programmes run by the Department

■ Post Graduate Programme -

Specialization in Organic Chemistry and Inorganic Chemistry

■ Under Graduate Programme—

Four years Chemistry Hons. With Research Programme.

■ Under Graduate Programme -

Three years Chemistry Major Programme.



DR. MOHAMMAD ZAKARIA



Pioneer of the Department



VISION AND MISSION

Chemistry for sustainable future and solve the emerging opportunities and challenges.



- **We have continuous effort to improve our quality education and lab. Practices.**
- **We are working as a mentor of budding scientist and creating interest among students to opt their carrier in the field of chemical Science as research scholar, Scientist and academicians to achieve the target of the nation as a Developed country**
- **We have tried to create sensitivity to face the challenges in life both in academic field as well as in their personal life and how to achieve their goals.**

- We are engaged to provide concept and knowledge of chemical science for the need of our society.
- We are working on the principles of **GREEN CHEMISTRY**
- We are working on effective waste management on the principle that **“Today’s waste will be the future raw material”**.

FACULTY INTRODUCTION

1. Dr. Khurshid Anwar Khan, H.O.D

2. Dr. Jai Prakash Mishra

3. Dr. Hare Kishore Shaw

4. Miss. Mousumi Sarangi

5. Dr. Ali Jaan Hussain

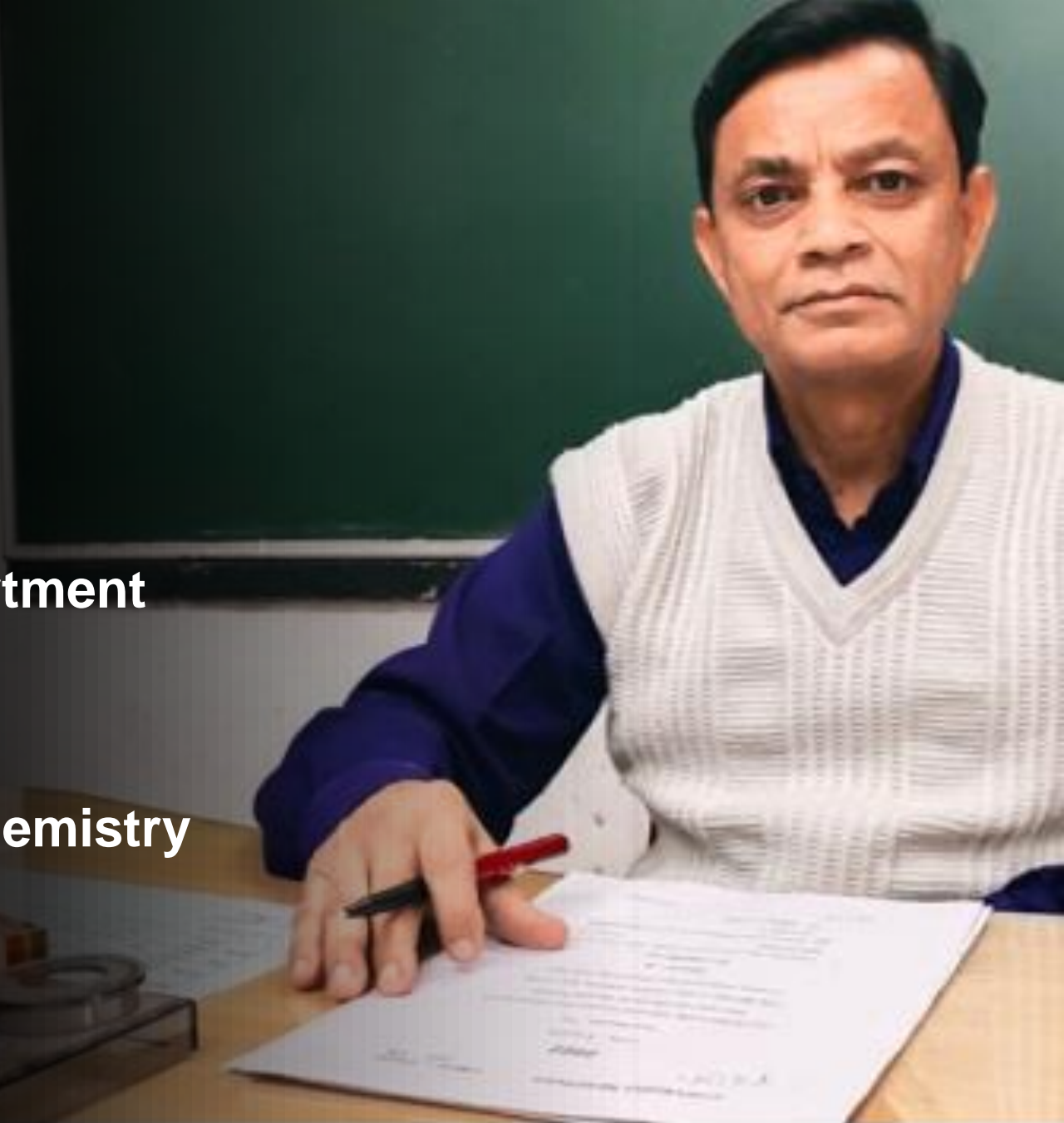
LAB Supporting Staffs

1. Mr. Naseem Ahmad

2. Mr. Mohammad Imran

DR. KHURSHID A. KHAN

- **Designation : Assistant Professor**
- **Present Position : Head of the Department**
- **Highest qualification : M.Sc. Ph.D**
- **Specialization : Organic Chemistry**
- **Area of interest : Natural Product Chemistry**
- **No of Publications : 05**
- **No of Paper presentation : 04**
- **No of workshop : 06**



Dr. Khurshid Anwar Khan

PUBLICATION
AND
ACHIEVEMENT
BY FACULTY
MEMBER

NAME OF TOPIC	NAME OF JOURNAL	VOLUME/PAGE	YEAR	ISSN/ISBN
Adhatoda vasica – A Source of important phytochemicals:	J.Chemtracks,	11 (2), 449	2009	(0973-239X)
A new aromatic ester from adhatodavasica:	J.Chemtracks	11 (2), 611-612	2009	(0973-239X)
Isolation and characterization of 2, 4-dihydroxynonane from Adhatoda vasica:	Oriental Journal of Chemistry,	26(3), 1233-1234	2010	(0907-020X)
Isolation and characterization of 27-Hydroxynonacosan-3-one:	ActaCienciaIndica	XLIIC, No. 4,507	2017	(0253-7338)
Skill-based, Problem-based, Research-based learning	Advances in Science Education, Lincoln Research and Publishing Limited	52-58	2021	978-0-6488798-2-4

ACHIEVEMENTS

- **Two days faculty development programme on data analysis in STATCRAFT on 22nd 23rd July 2020, organised by Faculty of Commerce Karim City College Jamshedpur in association with Predictive Analytics Solutions Private Limited, Bangalore.**
- **Participation in two days in the International virtual conference on Nano materials FIVCON-2020 on 10th and 12th September 2020, Organised by Dept. of Nano Technology Acharya Nagarjuna University, Guntur. Andhra Pradesh.**
- **Online training on Academic leadership under PMMMNMTT under (Ministry of Education Govt. of India) Organised by CALEM Aligarh Muslim University Aligarh from 28 January 2021 to 03 February 2021.**

- **Delivered a lecture in seminar on Covid-19 Vaccine, Organised by Dept. of Chemistry Jamshedpur Co-operative College, Jamshedpur, on 1st November 2021.**
- **Participation in National seminar conducted by faculty of Commerce, Karim City College, Jamshedpur, on Agricultural and Rural Development, on 4th and 5th January 2023.**
- **Participation in Academia Meet conducted by NML, Jamshedpur, on 28th of April 2023 under the Umbrella of CSIR on account of “Prime Minister One Lab One Nation” Programme.**
- **Science Exploration tour for our PG Students to Indian Institute of Science (IISc) Bangalore headed by Dr. Khurshid Anwar Khan on the occasion of open day 2024 held on 24.02.2024. Tour was sponsored by Tata Steel Foundation.**

DR. JAI PRAKASH MISHRA

- Designation : Assistant Professor
- Highest qualification : M.Sc. Ph. D
- Specialization : Inorganic Chemistry
- Area of interest : Chemistry of Complex Compounds
- No of Publications : 02
- No of workshop : 03



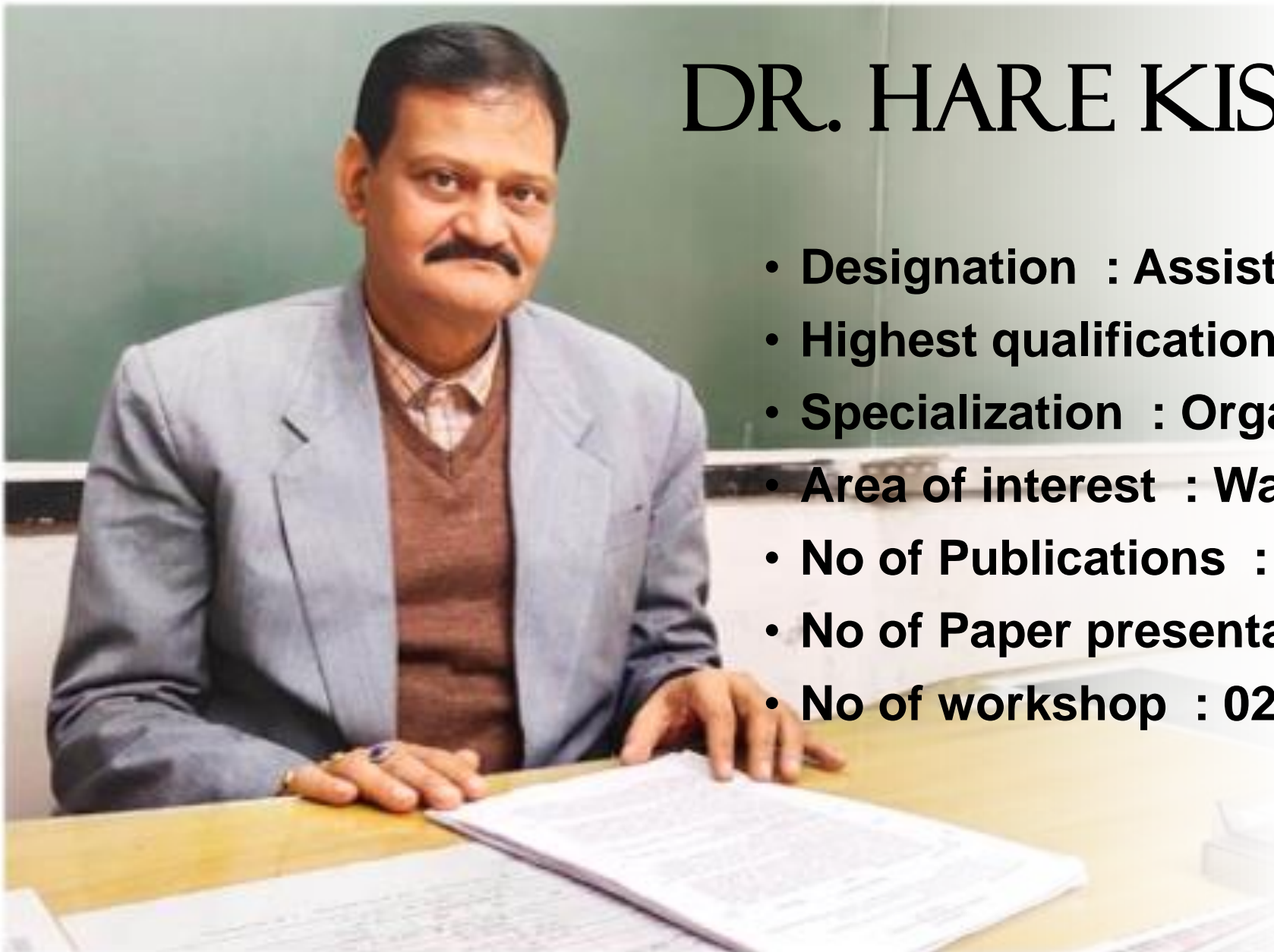
PUBLICATION AND ACHIEVEMENT BY FACULTY MEMBER

Dr. Jay Prakash Mishra

NAME OF TOPIC	NAME OF JOURNAL	VOLUME	YEAR	ISSN/ISBN
1. Metal Complexes with Substituted Biphenyls Synthesis and characterization of complexes of 2-hydroxy-3 nitro acetophenyl amino guanidine with 3d-series transition metals	Asian Journal of Chemistry	11 (3) 694-698	1999	0973-3450
	Journal of Ultra Chemistry Bhopal	8 (2) 195-204	2012	

- **Workshop at Karim City College on NEP 2020: A visionary Roadmap towards Transforming Indian Education Focused on Science, Technology, Research and Skill Development.**
- **Online training on Academic leadership under PMMMNMTT under (Ministry of Education Govt. of India) Organise by CALEM Aligarh Muslim University Aligarh from 28 January 2021 to 03 February 2021.**
- **Participation in Seminar conducted by Faculty of Commerce on Agricultural and Rural Development on 4th and 5th January 2023.**
- **A lecture delivered in LBSM College, Jamshedpur, on the topic Molecular Orbital theory on 21st February 2023.**

DR. HARE KISHORE SHAW



- Designation : Assistant Professor
- Highest qualification : M.Sc. Ph.D
- Specialization : Organic Chemistry
- Area of interest : Water Quality Assessment
- No of Publications : 04
- No of Paper presentation : 01
- No of workshop : 02

Publication and Achievement by Faculty Member

Dr. Hare Kishore Shaw

NAME OF TOPIC	NAME OF JOURNAL	VOLUME	YEAR	ISSN/ISBN
1. Study in metal transport phase in river around Jamshedpur	J.Chemtracks	11 (2), 497-500	2009	(0973-239X)
2. Study in river's bottom sediments in Kharkai and Subernarekha River around Jamshedpur for metallic pollution	J. Chemtracks	12 (2), 315-318	2010	(0973-239X)
3. Study in metal transport phase in river water around Jamshedpur	J. Chemtracks	12 (2), 467-470	2010	(0907-020X)
4. Study in metal transport phase in river around Jamshedpur	International journal (IJAORT)	Volume 1, issue 4	2012	[ISSN 2278-7763]

- **Visit Material Science Lab. in National Metallurgical Laboratory on 27th Feb 2017.**
- **Visit Uranium Mines at Turamdih and Uranium Ore processing unit of UCIL at Jadugoda on 15TH Feb 2017.**
- **Online training on Academic leadership under PMMMNMTT under (Ministry of Education Govt. of India) Organise by CALEM Aligarh Muslim University Aligarh from 28 January 2021 to 03 February 2021.**
- **A lecture was delivered in LBSM College, Jamshedpur, on the topic Hybridisation on 15th Feb. 2023.**
- **Participation in Seminar conducted by Faculty of Commerce on Agricultural and Rural Development on 4th and 5th January 2023.**



MISS. MOUSUMI SARANGI

- **Designation : Assistant Professor**
- **Highest qualification : M.Sc.**
- **Specialization : Organic Chemistry**
- **Area of interest : Medicinal Chemistry**

ACHIEVEMENTS

- PMMMNMTT under (Ministry of Education Govt. of India) Organise by CALEM Aligarh Muslim University Aligarh from **18th December 2024 to 27th December 2024.**
- Participated in One Week Online Training on “**Research Training**”, held from 26th September 2022 to 07th October 2022 (Weekdays only), organized by **MSME-TECHNOLOGY DEVELOPMENT CENTRE (PPDC). Reg. No: 154923**

DR. ALI JAAN HUSSAIN

- **Designation : Assistant Professor**
- **Highest qualification : M.Sc. Ph.D**
- **Specialization : Organic Chemistry**
- **Area of interest : Atmospheric Chemistry**
- **No of Publications : 04**
- **No of Paper presentation : 05**
- **No of workshop : 01**
- **No of Patent : 01**



Publication and Achievement by Faculty Member

Dr. Ali Jaan Hussain

Sl. No	Title	Authors	Journal	Publisher	IF	ISSN	Vol.	Pages
01	Black Carbon Emissions from Traffic Contribute Sustainability to Air Pollution in Urban Cities of India	Ali Jaan Hussain, Tapan Kumar Sankar, Meththika Vithanage, Balram Ambade, Sneha Gautam	Water, Air, & Soil Pollution	(Springer International Publishing)	2.98	1573-2932	234	217
02	Black carbon emissions in the rural Indian households: Sources, exposure, and associated threats	Ali Jaan Hussain, Balram Ambade, TK Sankar, AA Mohammad, Faruq	Geological Journal	(Wiley)	2.13	1099-1034	--	--

Sl. No	Title	Authors	Journal	Publisher	IF	ISSN	Vol.	Pages
03	Impact of COVID-19 on Black Carbon and Carbon monoxide levels and its health risk assessment over East India	Tapan Kumar Sankar, Amit Kumar, Balram Ambade, Dilip Kumar Mahato, Ali Jaan Hussain, Shrikanta Shankar Sethi, Faruq Mohammad, Ahmed A	Aerosol Science and Engineering (Springer Nature Singapore)	(Springer Nature Singapore)	1.62			
04	Emission of black carbon in heavy traffic areas of Jamshedpur and Ranchi: Risk exposure to humans	Ali Jaan Hussain, Tapan Kumar Sankar, Balram Ambade, Amit Kumar, Shrikanta Shankar Sethi	Brazilian Journal of Development			2525-8761	10	67541-67541

PATENT

- Dr. Alok Sagar Gautam, Dr. Balram Ambade, Dr. Tapan Kumar Sankar, Dr. Amit Kumar, Dr. Shrikanta Shankar Sethi, Dr. Kailash Chandra Das, Dr. Prakash Narayan, Mr. Dilip Kumar Mahato, **Mr. Ali Jaan Hussain**; INTEGRABLE LASER MARKER, Design number: 6300180; Grant date: 08 August 2023; Registration date: 29 July 2023; GOV.UK; <https://www.registered-design.service.gov.uk/find/6300180>

AWARDS/HONOUR

- **Young Researcher Award 2023 held in (4th to 6th November 2023)** by Environment and Social Development Association (**ESDA**) on the occasion of **4th WORLD ENVIRONMENT SUMMIT 2023** held at Galgotias University (Greater Noida, U.P. (India))
- **Junior Researcher Award 2023** held in **September 22, 2023** by International Foundation for Environment and Ecology (IFEE) on the occasion of International Conference on Environment, Aquaculture and Sustainable Agriculture held at St. Xavier's College, Ranchi, Jharkhand, India (Certificate No.: **IFEE/172/2023**)
- Participated and attended in International conference on topic **“A comparative study of black carbon aerosol & their Health risk assessment in urban atmosphere”** and got **2nd prize** held on **10-11 Feb 2023**, organised by G.H Rasoni University, Amravati, Nagpur, India.

MEMBERSHIP

- International Foundation for Environment and Ecology (ESDA) “**Life Member**”
Environment and Social Development Association (ESDA)
(ESDA Membership No-**L- 701**)
- International Foundation for Environment and Ecology “**Life Member**”
(Certificate No.: **LM/288/2023**)
- Breakthrough Science Society (Jharkhand State Chapter) “**Member**
(JBSS01402023)” Jan, 2023 to Dec, 2023

CONFERENCE/SEMINAR/WORKSHOP

1. “International E-conference on Integrated Sciences” organized by Department of Botany, Chemistry, Mathematics & Statistics and Zoology, Shri. Yashwantrao Patil Science College, Solankur on 8th & 9th February, 2024
2. Participated and attended in 11th International Science Congress (ISC-2023), held on 8th & 9th December, 2023 at Pacific Academy of Higher education and Research University, Udaipur, Rajasthan, India
3. Participated and attended in International conference on “Environment, Aquaculture and Sustainable Agriculture (IFEE)”, held on 22-24 September 2023 at St. Xavier’s College, Ranchi, Jharkhand, India.
4. Participated in International conference on “Green Initiatives for environmental issues and sustainable development (GESD-2023)”, held on 10-11 Feb 2023, organized by G.H Rasoni University, Amravati, Nagpur, India.
5. International Webinar on Empowering Diversity in Science (GWB-2022), held on 16th February 2022, organized by Department of Chemistry, Kamla Nehru Mahavidyalaya, Nagpur, Association of Chemistry Teachers (ACT) Mumbai & Department of Chemistry, Kalasalingam Academy of Research and Education (KARE), Krishnankoil in Collaboration with International Union of Pure & Applied Chemistry (IUPAC), Global Women’s breakfast-2022. (E809DU-CE000100)
6. International Webinar on Chemistry Education (IWCE-2021), held on 4-5 February 2022, organized by Department of Chemistry, Kamla Nehru Mahavidyalaya, Nagpur, Department of Chemistry, Govt. Madhav Science PG College, Ujjain, Association of Chemistry Teachers (ACT), Mumbai. (QZZBQA-CE000158)

- 7.** One-day National Webinar on “Carbon emission & climate change in India”, held on 18th January 2022, organized by the Department of Botany in association with Internal Quality Assurance Cell (IQAC), Jamshedpur Co-operative College, Jamshedpur (Jharkhand).
- 8.** Certificate of participation in the training program on “Udyam registration bootcamp: MSME Promotion for Entrepreneurship Development” held on 5th March 2021, organized by CSIR-NML Jamshedpur.
- 9.** Participated in webinar on “ATOMIC ENERGY”, held on 14th October, 2020, jointly organized by Atomic Minerals Directorate for Exploration and Research & RVS College of Engineering and Technology, Jamshedpur.
- 10.** Attended Online Alumni Meet - 2021 on the theme “Alchemy of Covid-19”, held on 1st November 2021, organized by the Department of Chemistry, Jamshedpur Co-operative College, Jamshedpur.
- 11.** 27th International Conference of International Academy of Physical Sciences (CONIAPS XXVII) on Recent Advances in Catalysis Science & Engineering (RACSE), held on 26-28 October 2021 (Virtual Event), Organized by the Department of Chemistry National Institute of Technology (NIT) Jamshedpur, Jharkhand, India.
- 12.** Participated in “One Day Online Workshop on Atmospheric Observations and Weather Monitoring Techniques (AOWMT 2020)”, held on 12th December 2020, organized by SRM Institute of Science and Technology and South Asian Meteorological Association.
- 13.** Participated in International e-conference on “Advances in Science and Technology for Betterment of Health, Environment and Energy”, held on 1-3 December 2020, organized by the Department of Chemistry, GITAM School of Science, Bengaluru, India.

PROGRAMME OUTCOME

To understand the diversity of the subject in the different fields to generate creativity and scientific attitude.



Programme Outcome

- ❑ To encourage students to fix their feet and bright their carrier in the field of science and **technology for sustainable future and solve the emerging opportunities and challenges.**
- ❑ To encourage our budding scientists in the field of chemical research for human well beings.
- ❑ To encourage and motivate the students to understand the chemistry in our daily life.
- ❑ To inspire students to **follow the principles of green chemistry** which provides guideline for the exploration of nature without disturbing equilibrium .
- ❑ We help the students to understand theoretical chemistry with practical applications.
- ❑ To create awareness and understanding of various critical perspectives and environmental challenges.
- ❑ To encourage students to adopt comparative understanding with mathematical, biological and social sciences.

PROGRAMME OUTCOME ANALYSIS

Semester	Paper	Expected outcomes
SEM-1	Inorganic Chemistry-1 (MJ-1)	<ul style="list-style-type: none">• After completing the course, students will be able to understand.• Atomic theory and its evaluation.• Physical and chemical properties of the elements in the periodic table and Periodicity of elements• Bond interaction between atoms and three dimensional approach of the molecules molecules in the aggregation.
SEM-2	Organic Chemistry-1 (MJ-2)	<ul style="list-style-type: none">• Bonding, reactivity, reaction mechanism and pathways.• The stereo selectivity and reactivity of organic molecules.

Semester	Paper	Expected outcomes
SEM-2	Physical Chemistry (MJ-3)	<ul style="list-style-type: none"> States of matter. Ionization of electrolyte.and Ionic equilibrium
SEM-3	Inorganic Chemistry-2 (MJ-4)	<ul style="list-style-type: none"> Oxidation-reduction and their use in metallurgy. Chemistry of s and p block elements. Inorganic polymers and their uses.
	Organic Chemistry-2 (MJ-5)	<ul style="list-style-type: none"> The basic uses of reagents and mechanism of their action. Organometallic compounds and their uses in the organic synthesis.

PROGRAMME OUTCOME ANALYSIS FOR UG (FYUGP) UNDER NEP

PROGRAMME OUTCOME ANALYSIS FOR PG CHEMISTRY

Semester	Paper	Expected outcomes
SEM-1	Analytical Chemistry (CC-1)	<ul style="list-style-type: none">• After completing the course, students will be able to analyze• Data obtained from different instruments.• Chromatography and spectroscopy experiments.
	Inorganic Chemistry (CC-2)	<ul style="list-style-type: none">• The physical and chemical properties of transition metal complexes, and metal pi- complexes.• They will learn how to interpret data obtained from physical techniques to characterize compounds.

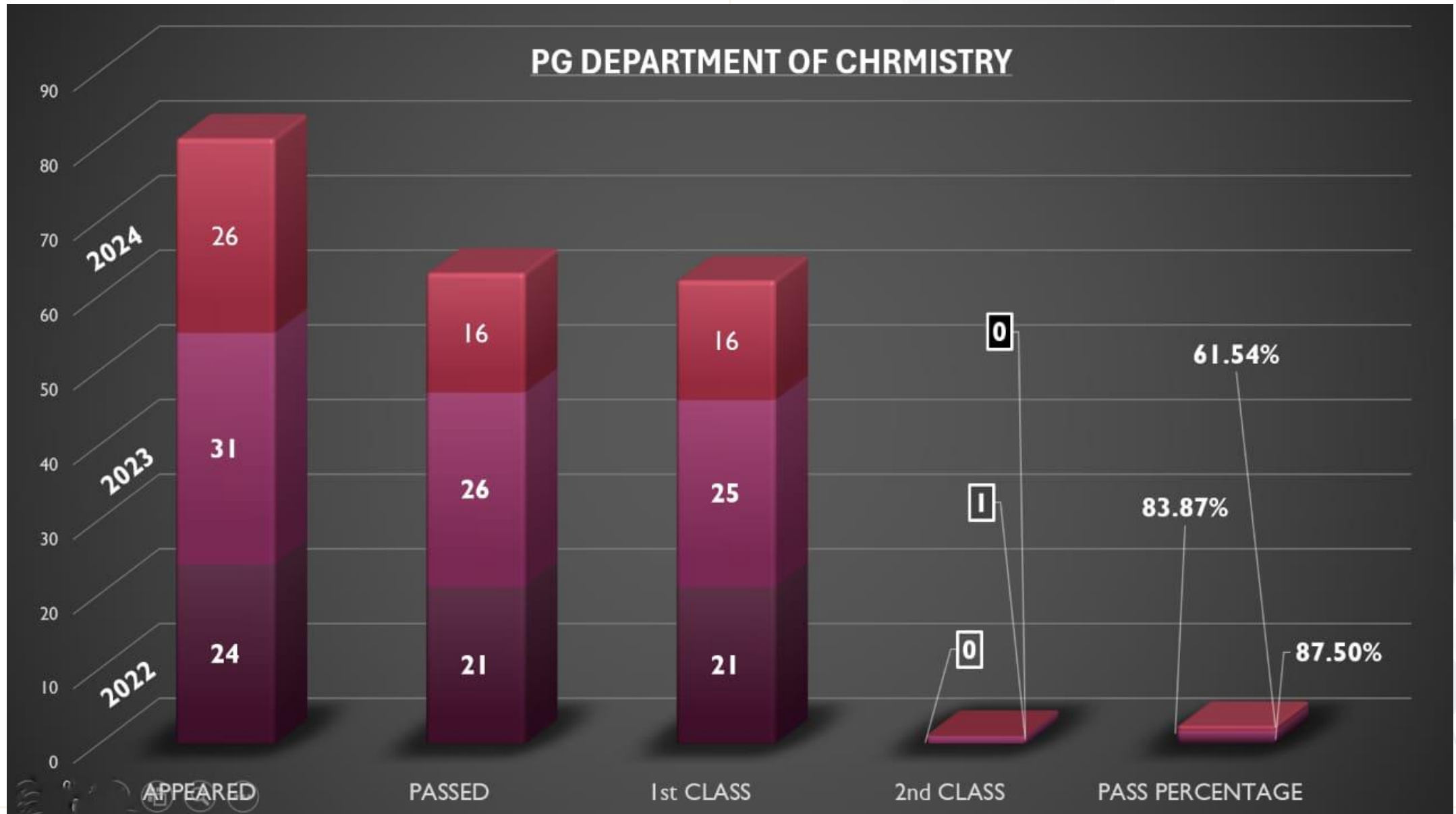
PROGRAMME OUTCOME ANALYSIS FOR PG CHEMISTRY

Semester	Paper	Expected outcomes
SEM-1	Organic Chemistry (CC-3)	<ul style="list-style-type: none">At the end of the course, students will gain understanding of theoretical concept of organic chemistry and develop practical skill.
	Physical Chemistry (CC-4)	<ol style="list-style-type: none">Quantum Chemistry:<ul style="list-style-type: none">At the end of the course, the learners should be able to understand quantum mechanical in chemistry.Thermodynamics:<ul style="list-style-type: none">After completing the course, the learners should be able to analyze thermodynamical and statistical approach in chemistry

RESULT OF PG FINAL YEAR STUDENTS

Session	Number of Students appeared	Number of Students passed	No. Students getting first class with Distinction	No. Students getting first class	Pass percentage
2020-22	24	21	01	21	87.50%
2022-23	31	26	10	25	83.87%
2023-24	26	16	01	16	61.54%

RESULT OF POST GRADUATE (CHEMISTRY)

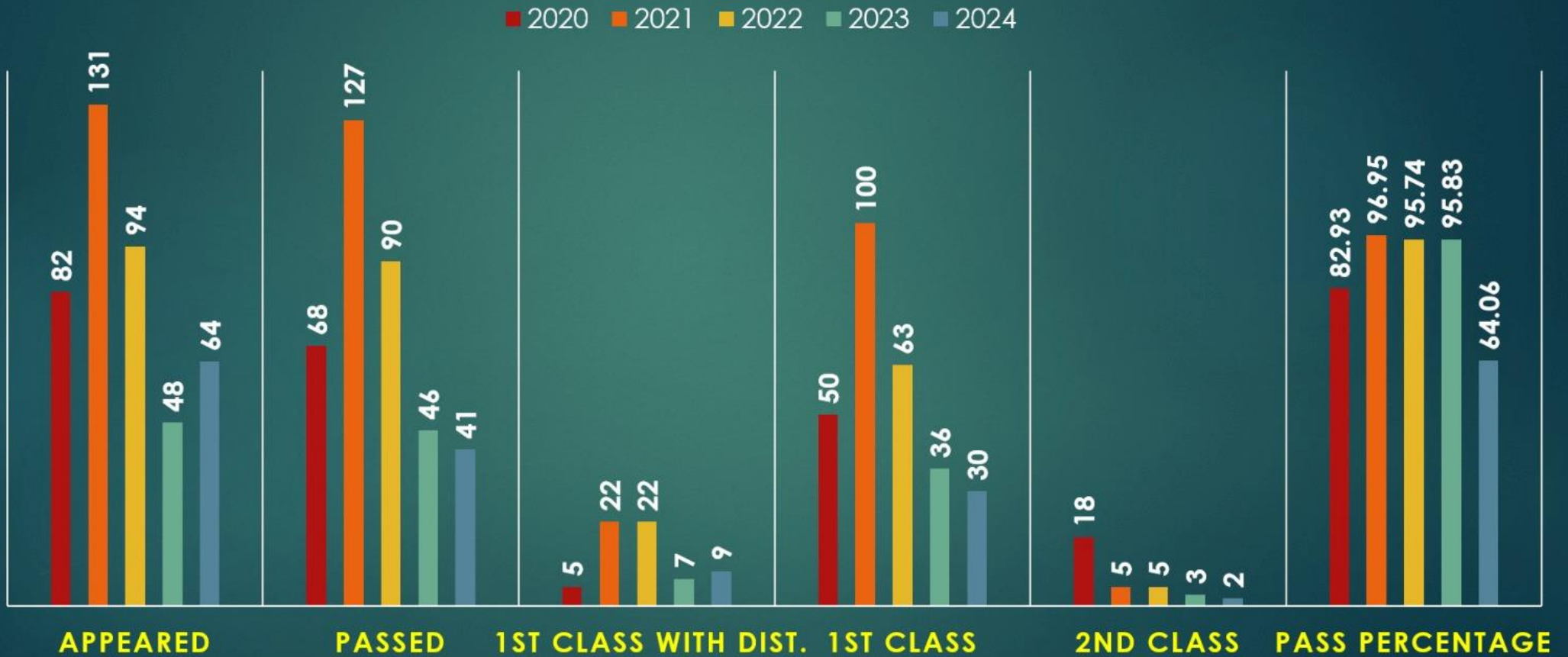


RESULT OF UG FINAL YEAR STUDENTS

Session	Number of Students appeared	Number of Students passed	No. Students getting first class with Distinction	No. Students getting first class	No. Students getting second class	Pass percentage
2023-24	64	41	09	30	02	64.06%
2020-23	48	46	07	36	03	95.83%
2019-22	94	90	22	63	05	95.74%
2018-21	131	127	22	100	05	96.95%
2017-20	82	68	05	50	18	82.93%
2016-19	63	48		39		77.78%
2015-18	55	45		33		81.82%

RESULT OF UG FINAL YEAR STUDENTS

UG DEPARTMENT OF CHEMISTRY



DEPARTMENTAL TOPPERS LIST (CHEMISTRY)

Under Graduate

Sl. No.	Year	Name of Toppers
01	2017	Sania Marfani (University Topper)
02	2018	Shashanka Modak
03	2019	Parmeshwar Pradhan (University Topper)
04	2020	Bikash Mahakud
05	2021	Sajda Perween
06	2022	Ajay Bhowmick
07	2023	Saloni Kumari
08	2024	Abhishek Kumar

DEPARTMENTAL TOPPERS LIST (CHEMISTRY)

Post Graduate

Sl. No	Year	Name of Toppers
01	2022	Gourav Agrahari and Smriti Rekha Tewary
02	2023	Nikita Panda
03	2024	Aiyasha Naushin

MEASURES TAKEN FOR SLOW & ADVANCE LEARNERS

Identification of slow and fast learners

- They are identified by learning pattern and response in the class and laboratory work.
- Slow and advance learners are identified by class assessment performance and viva-voce.
- By observing performance in seminars, debates and class tests.

**SLOW
LEARNERS ARE
IMPROVED BY
MEANS OF
FOLLOWING
MEASURES.**

- **Slow learners may not respond well to traditional teaching and learning. They need alternative approaches like visual aids, small group activities and more personalized attention.**
- **Encourage them by recognizing and celebrating small achievements and motivations.**
- **Provide an atmosphere to feel comfortable to ask questions and seek help by creating small groups.**

STUDENT'S ACHIEVEMENT

Higher Education and Research Field

Sl. No	Year	Name of Students	Achievement	Rank/Company
01	2024	Ankit Kumar Pandey	J AM Scored pursuing Master Degree in NIT Bhopal	All India 1481
02	2024	Upen Kisku	JAM Scored pursuing Master Degree in IIT Kharagpur	All India 1757
03	2024	Nikita Panda	Project Associate I	NML Jamshedpur
04	2024	Bholenath Bhakat	Project Assistant II	NML Jamshedpur

Sl. No	Year	Name of Students	Achievement	Rank/Company
05	2024	Rishav Srivastava	Project Assistant II	NML Jamshedpur
06	2023	Abhishek Mahato	Project Assistant II	NML Jamshedpur
07	2022	Vikash Mahato	Project Associate I	NML Jamshedpur
08	2021	Akif Raza	JAM Scored	All India 1185

PLACEMENT

Sl. No	Year	Total No. of Selected Students	Company Name
01	2024	01	Post of Charge man (AWS) Indian Railway
02	2024	01	Lead Chemist Tata Power Ltd.
03	2024	10	Graduate Trainee for Vedanta, ESL Steel Ltd.
04	2024	01	Bharat Aluminium Company Ltd.
05	2023	10	Graduate Trainee for Vedanta, ESL Steel Ltd.
06	2023	09	Jindal Stainless Steel Ltd.
07	2021	06	Graduate Trainee for Vedanta, ESL Steel Ltd.

ACHIEVEMENTS OF THE DEPARTMENT

- ❖ Faculty members have many research Publications in National and International Journals and participation in National and International seminars and workshops sponsored by UGC and CSIR.
- ❖ Two minor research projects funded by UGC were successfully completed by Principal Dr. Mohammad Zakaria, and Dr. Md. Hasan Imam Warsi Ex Head of the department .
- ❖ A research project of Ph.D. work on isolation, structure determination and characterization of compounds extracted from medicinal plants was successfully completed by Dr. Khurshid Anwar Khan in our departmental laboratory supported by Central Drug Research Institute, Lucknow.
- ❖ Science Exploration tour for our PG Students (**ST/SC**) to Indian Institute of Science (IISc) Bangalore headed by Dr. Khurshid Anwar Khan on the occasion of open day 2024 held on 24.02.2024. Tour was sponsored by Tata Steel Foundation.



Visit to Chemical Science Department IISc Bangalore



A discussion with Prof. Asutava after visiting of various departments

Science Exploration Tour to Indian Institute of Science (IISc) Bangalore, by (ST/SC) Students of PG Department of Chemistry Karim City College, Jamshedpur Sponsored by TATA STEEL FOUNDATION on 24th Feb. 2024.



Visit to the Main building IISc Bangalore



Main Gate of Tata Steel Foundation

DEPARTMENTAL ACTIVITIES

5 Dec. 2018

On 05th of December 2018 we organized a student seminar on the topic "Applications of Organic Synthesis" in which students of B. Sc. Sem. III and Part III participated with their ideas on the topic.

17 Jan. 2019 and 18 Jan. 2019

Organise Departmental Class Test of B. Sc. Sem. I, II and Part III students on 16

10 Apr. 2019

A career counseling is organized on 10.04.2019 by guest faculty Dr. Nazrul Islam, Assistant Professor Jamshedpur Workers' College, Jamshedpur.

A field project of River water analysis is conducted by dept. of chemistry at Kopali village and Domuhani on 12th Jan.2019 by our part III chemistry Hons students; supervise by Dr. Khurshid A. Khan and Dr. H. K. Shaw.

12 Jan. 2019

Department of Chemistry organized a seminar on National Science day on 28th February 2019. Topic of the seminar "Contribution of Indian scientist in modern India"

28 Feb. 2019

INFRASTRUCTURAL FACILITIES

Departmental laboratory is fully equipped with undergraduate post graduate and Research level students

- **UV-Vis Spectrophotometer,**
- **Soxhlet extractor**
- **Thin layer Chromatographic kit**
- **Column Chromatographic kit**
- **Paper Chromatographic kit**
- **UV chamber**
- **Mechanical stirrer**
- **Mechanical shaker**
- **Mechanical wrist Shaker**
- **Conductivity meter**
- **Centrifuge machine**
- **Vacuum pump**
- **Victor Mayer apparatus**
- **Magnetic stirrer**
- **Photoelectric colorimeter**
- **Turbidity colorimeter**
- **Digital calorimeter**
- **Melting point apparatus**
- **pH meter**

- **High accuracy digital balance**
- **Centrifuge machine**
- **Digital Colormeter-112**
- **Laboratory hot plate**
- **Digital water bath**
- **Digital oven**
- **Water distillation kit**
- **Water deionizer kit**
- **Abbe's refractometer**
- **Soil and water testing kit**
- **Advance compound microscope**
- **Polarimeter**
- **Deionizer**
- **Kjeldahal apparatus**
- **Beckmann apparatus (M.P & B.P)**

A View of Departmental Laboratory





DEPARTMENTAL LIBRARY

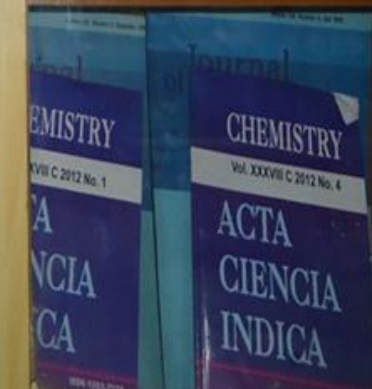
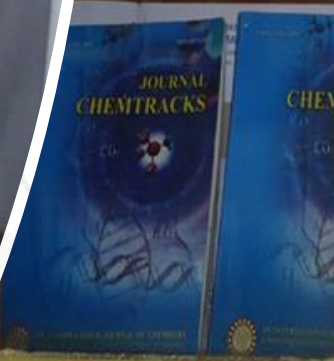
A departmental library is also working in chemistry department with books and Journals of National and International repute.



DEPARTMENT OF CHEMISTRY KARIM CITY COLLEGE, JAMSHEDPUR FIRST AID IN THE LABORATORY	
TYPES OF ACCIDENT	FIRST AID TREATMENT
1. Acid Burn	Wash the affected portion with plenty of water, dry the skin & apply BURNOL. Apply BURNOL.
2. Burn by flame or hot object	Wash the affected eye with plenty of water
3. Acid or Alkali in Eye	Drink Plenty of water
4. Swallowed Acid or Alkali	Apply pressure to stop the bleeding, Apply Dettol on the wound & bandage the portion.
5. Cut	

Note : For Emergency contact the DOCTOR.

JOURNALS



BEST PRACTICES

We adopt following best practices

- **Conducting group discussion and seminar to develop confidence, innovative thoughts and presentation.**
- **Project work conducted by the students on environmental issues and natural products analysis to enhance the skill of chemical analysis.**
- **Conducting field work on ground water analysis of nearby Jamshedpur which is part of health awareness programme .**

FUTURE PLAN

- **Minor research project works in the department by the faculty members.**
- **To start applied chemistry branches such as Bio-chemistry, Analytical Chemistry etc.**
- **Project work on natural products, soil testing and water analysis hiring from government and non government agencies.**

TEACHING METHODOLOGY

Important measures for smart learning techniques for students:

- **Using e-class room**
- **Familiar with modern laboratory equipments**
- **Using Virtual Library**
- **Encourage Students to use the of reading room**
- **Maximum use of college library**
- **Organise Industrial & Laboratory tours**
- **Organise fieldwork**
- **Develop basic computer skill**
- **Group discussion**

TEACHING METHODOLOGY

- **Students seminars**
- **Special lectures by internal and external faculties**
- **Internal exam for the assessment of the students**
- **Parents teacher meeting**
- **Foundation course for weak students**
- **Encourage students for to prepare for entry-level examinations for higher study and employments**
- **Organise Career Fair on National Science Day**
- **To demonstrate information literacy and human responsibility**
- **Encourage the students toward creativity and generate a scientific attitude**
- **Help to understand the diversity of the subject in the different fields**
- **To understand chemistry for sustainable development by using the principle of **GREEN CHEMISTRY****



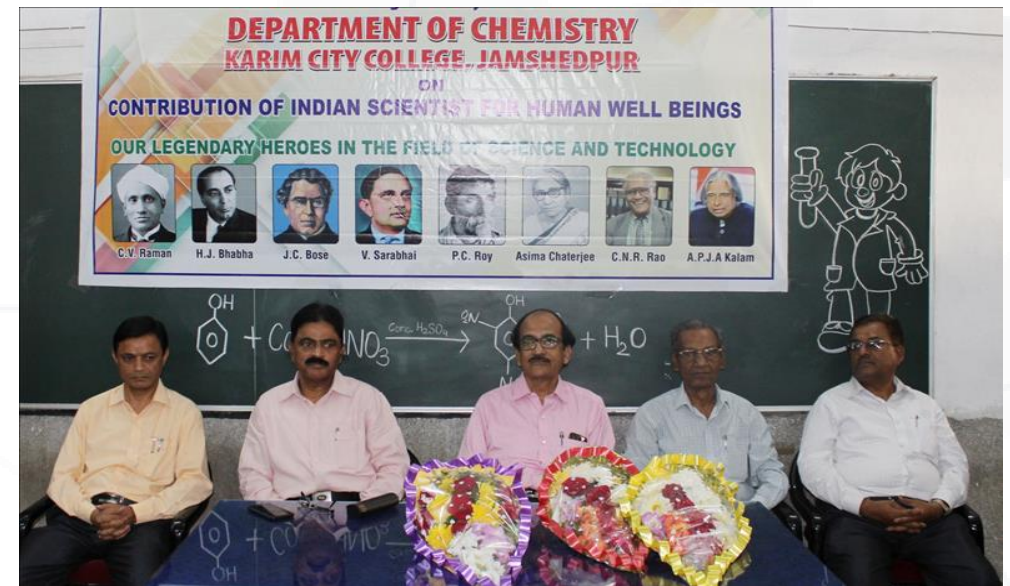
A View of Water analysis camp in Kopali village



Guest Lecture in National Science day celebration



58 Students conducting Water analysis in Kopali village



Opening Session of National Science Day Celebration









UNIVERSITY TOPPER'S



CHALLENGES OF THE DEPARTMENT

- ❖ **To make our courses more skill based and to develop our laboratory more research oriented in diverse field.**
- ❖ **Our students able to create their own startup by applying subject skill in the area like chemical industry, Food processing industry Herbal product processing etc.**



THANK YOU

QUESTION
PLEASE...

