





NEWSLETTER

METALLURGY DEPARTMENT

(NBA ACCREDITED 2023-25)

January 2024 to June 2024



METALLURGY

राष्ट्रीय प्रत्यायन बोर्ड

चौथा तल, ईस्ट टावर, एन. बी. सी. सी. प्लेस, भीष्म पितामह मार्ग, प्रगति विहार, लोधी रोड़, नई दिल्ली -110003

NATIONAL BOARD OF ACCREDITATION





F.No- 20-78-2013-NBA

Date: 27-04-2022

To The Principal Government Engineering College, Gandhinagar Nr. G.E.B. Cross Road, Sector - 28, Gandhinagar - Gujarat - 382028

Subject: Accreditation status of program applied by Government Engineering College, Gandhinagar Nr. G.E.B. Cross Road, Sector - 28, Gandhinagar - Gujarat - 382028.

Sir,

This has reference to your application I.D. No. 5695-15/06/2021 seeking accreditation by National Board of Accreditation to UG Engineering program offered by Government Engineering College, Gandhinagar Nr. G.E.B. Cross Road, Sector - 28, Gandhinagar - Gujarat - 382028.

An Expert Team conducted onsite evaluation of the program from 18th to 20th February,2022. The report submitted by the Expert Team was considered by the concerned Committees constituted for the purpose in NBA. The Competent Authority in NBA has approved the following accreditation status to the program as given in the table below:

SI. No.	Name of the Program(s) (UG)	Basis of Evaluation	Accreditation Status	Period of validity	Remarks
(1)	(2)	(3)	(4)	(5)	(6)
1.	Metallurgy	Tier II June 2015 Document	Accredited	Academic Years 2022-2023 to 2024-2025 i.e.up to 30-06-2025	Accreditation status granted is valid for the period indicated in Col.5 or till the program has the approval of the Competent Authority, whichever is earlier

- It may be noted that only students who graduate during the validity period of accreditation, will be deemed to have graduated with an NBA accredited degree.
- The program has been granted accreditation for 3 years. Government Engineering College, Gandhinagar Nr. G.E.B. Cross Road, Sector - 28, Gandhinagar -Gujarat- 382028 should submit the Compliance Report at least six months before the expiry of validity of accreditation mentioned above so as to be eligible for consideration by the concerned Committee in NBA for further processing of the accreditation status.
- The accreditation status awarded to the program as indicated in the above table does not imply that the accreditation has been granted to Government Engineering College, Gandhinagar Nr. G.E.B. Cross Road, Sector - 28, Gandhinagar — Gujarat- 382028 as a whole. As such the Institution should nowhere along with its name including on its letter head etc. write that it is accredited by NBA because it is program accreditation and not Institution accreditation. If such an instance comes to NBA's notice, this will be viewed seriously. Complete name of the program(s) accredited, level of program(s) and the period of validity of accreditation, as well as the Academic Year from which the accreditation is effective should be mentioned unambiguously whenever and wherever it is required to indicate the status of accreditation by NBA.
- The accreditation status of the above program is subject to change on periodic review, if needed by the NBA. It is desired that the relevant information in respect of accredited program as indicated in the table in paragraph 2, appears on the website and information bulletin of the Institute.

Tel: +91 11 2436 0620-22, 2436 0654; Telefax: +91 11 4308 4903 Website: http://www.nbaind.org | Email:membersecretary@nbaind.org Contd./_

- The accreditation status awarded to the program as indicated in table in paragraph 2 above is subject to maintenance of the current standards during the period of accreditation. If there are any changes in the status (major changes of faculty strength, organizational structure etc.), the same are required to be communicated to the NBA, with an appropriate explanatory note.
- A copy each of the Report of Chairman of the Visiting Team and Evaluators' Report in respect of the above program is enclosed.
- If the Institute is not satisfied with the decision of NBA, it may appeal within thirty days of receipt of this communication giving reasons for the same and by paying the requisite fee.

Yours faithfully,

(Dr. Anil Kumar Nassa) Member Secretary

Encls.: 1. Copy of Report of Chairman of the Visiting Team.

Copy of Expert Report of the Visiting Team.

GOVERNMENT ENGINEERING COLLEGE SEC-28. GANDHINAGAR

ABOUT THE INSTITUTE

Established in 2004, Government Engineering College, Gandhinagar (GEC-Gn) takes pride in its highly motivated students. Our students are life-long assets that help this institute to continuously evolve and work towards its Vision. Approved by AICTE. The College is administrated by Directorate of Technical Education, Gujarat State, Gandhinagar. GEC Gn is affiliated to Gujarat Technological University. GEC-Gn offers its students a wide range of courses like Biomedical, Computer, Electronics & Communication, Instrumentation & Control, Information Technology and Metallurgy.

VISION OF THE INSTITUTE

To be a premier engineering institution, imparting quality education for innovative solutions relevant to society and environment.

MISSION OF THE INSTITUTE

- To develop human potential to its fullest extent so that intellectual and innovative engineers can emerge in a wide range of professions.
- To advance knowledge and educate students in engineering and other areas of scholarship that will best serve the nation and the world in future.
- To produce quality engineers, entrepreneurs and leaders to meet the present and future needs of society as well as environment.



ABOUT THE DEPARTMENT

The Metallurgy Department since its inception in 2008 is a backbone of GEC-Gandhinagar's events, research activities and initiatives. It is a unique initiative of Government of Gujarat in the present science and technology education and research scenario of India. At present, the department offers a four year undergraduate course in engineering. Faculty members are good blend of industrial/ academic research experienced, studied from national and state reputed institutes. Department has developed COQ (Centre for Quality) NDT which established under "Vibrant Gujarat—2019"- Financial MOU in collaboration with Gulfnde along with various well equipped metallurgical laboratories.

Currently, the focus of department activities are multi-directional with an emphasis on both research and education. Our collaborations with FCIPT, CFER, INDUS University, PDEU, IIM—Baroda Chapter, IIF- Ahmedabad Chapter, ASM International - Gujarat Chapter, IE—Gujarat Section, etc. Students are encouraged and supported to actively participate in various curricular and non-curricular activities at different level.

VISION OF THE DEPARTMENT

Developing excellence in Metallurgy Engineering education through research, development innovation and team work for the benefit of society and environment.

MISSION OF THE DEPARTMENT

- To prepare competent metallurgy engineers who can apply metallurgical fundamentals to control and manage different metallurgical and materials processing operations to produce quality metals products in industries.
- To deliver information about current trends in the field of metallurgy and materials to the students.
- To encourage students to work on innovative projects related to metallurgy engineering for managing defects free, economical, energy efficient products, processes or devices to best serve the nation to fulfil the socio-economic, technocommercial and environmental needs.

LIST OF FACULTY MEMBERS WITH QUALIFICATION

Sr. No.	Name of Faculty	Qualification	Designation
1	Dr. I. B. Dave	Ph.D (Met. & Mat. Engg.)	Professor & Head
2	Prof. S. I. Patel	ME (Met. & Mat. Engg.)	Assistant Professor
3	Dr. D. G. Sharma	Ph.D (Metallurgy)	Assistant Professor
4	Dr. H. H. Jadav	ME (Met. & Mat. Engg.)	Assistant Professor
5	Dr. P. K. Nanavati	Ph.D (Met. & Mat. Engg.)	Assistant Professor
6	Prof. D. V. Mahant	ME (Met. & Mat. Engg.)	Assistant Professor
7	Prof. B. R. Rana	ME (Met. & Mat. Engg.)	Assistant Professor
8	Prof. H. H. Thakar	ME (Met. & Mat. Engg.)	Assistant Professor
9	Prof. R. C. Ghanghas	ME (Met. & Mat. Engg.)	Assistant Professor

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ACHIVEMENTS OF THE FACULTIES



Dr. I B Dave Letter of Appreciation for delivering highly informative lectures on "Introduction to Manufacturing Processes" on 19/02/2024 organized by Metallurgy Department of Dr. S. and S.S. Ghandhy College of Engg. And Tech., Surat

Received letter of appreciation for delivering highly informative lectures on "Friction Stir Processing (FSP)-Manufacturing Technique" on 19/02/2024 organized by Metallurgy Department of Dr. S. and S.S. Ghandhy College of Engg. And Tech., Surat

Ms. Vidhi Mistry completed her Ph.D on "Study the electrochemical behavior of Al sacrificial anode by adding Mg" under supervision of Dr. I B Dave on 23/02/2024.



Prof S I Patel successfully completed MOOC on 'Learning English in Hindi'.

Contributed to G3Q in 2.0 (LARGEST QUIZ of India) for framing questions, translating questions and scrutinized questions.

Attended a half day workshop on 'Design Learner-Centric MOOC' on 16th March 2024, organized by IIT-Gandhinagar.

Attended webinar on 'Financial Awareness in Modern Life', organized by KCG, Education department, Government of Gujarat on 2nd April; 2024.

Dr. D G Sharma completed 2 week industrial training on New age technology in Laser Welding and cutting at Sahajanand Laser Technology Ltd, Gandhinagar during 10/06/2024 to 22/06/2024.

Reviewed paper for international peer review journal "Materials Today: Proceedings" from Elsevier.

Got grant sanction of Rs. 50000/- as CO-Investigator for Research Promotion Scheme for one year Minor Research Projects IQAC-GTU, Ahmedabad, Project title "To Study Wear And Mechanical Behavior Of Composite Surface Developed By Friction Surfacing"



Coordinated one week training of 23 semester 06 students with Dr. P K Nanavati on "Welding Technology" from 12-02-24 to 16-02-24 at iACE, Gandhinagar under IMPACT Scheme of GKS, CTE, Gandhinagar.

Worked as Hall facilitator in Vibrant Gujarat-2024 09-13 January 2024 at Helipad ground, Sector-17, Gandhinagar.

Coordinated First time voter interaction with Hon. PM Shri Narendra Modi Ji at Metallurgy Department on 25 January 2024.

Coordinated Republic Day Celebration at GEC Gandhinagar on 26 January 2024.

Worked as food and stall committee member in Hack the Spring Tech fest Event at GEC Gandhinagar on 1-2 March 2024.

Coordinated Thalassemia test along with Eye and dental checkup camp at 5-6 March 2024 at GEC Gandhinagar.

Appointed as Gandhinagar district coordinator of Vigyan Gurjari for the term 2024-26.

ACHIVEMENTS OF THE FACULTIES



Dr. H H Jadav reviewed paper for International Conference on Futuristic Advances in Mechanical Engineering for Aerospace and Defence (ICFAMEAD 2024).

Worked as Hall facilitator in Vibrant Gujarat-2024 09-13 January 2024 at Helipad ground, Sector-17, Gandhinagar.



Dr. P K Nanavati was nvited by Hertz Testing & Training Centre, GIDC Vatva, Ahmedabad to deliver Technical Session on Welding Qualification (Procedure & Performance) as per ASME SEC IX to Directorate of Boiler Dept officers, GoG, Vatva, Ahmedabad 24-25 February 2024

Successfully coordinated one week (12-02-2024 To 16-02-2024) practical Training on Welding Technology to 23 BE SEM 6th Metallurgy students at International Automobile Centre of Excellence (iACE), Raisan, Gandhinagar.



Prof. D V Mahant completed 2 weeks industrial training at Sahajanand Laser Technology Ltd. During 10/06/2024 to 22/06/2024.

Successfully organized a two-day hands-on training on "Hands on Foundry Practices" in collaboration with IFTARC, Indus University, Ahmedabad, and SSMEG at IFTARC on March 4th and 5th, 2024.



Prof. B R Rana successfully organized a two-day hands-on training on "Hands on Foundry Practices" in collaboration with IFTARC, Indus University, Ahmedabad, and SSMEG at IFTARC on March 4th and 5th, 2024.



Prof. H H Thakar published a research paper in SCOPUS indexed journal. (Details are given in research activity)

Received special appreciation from Principal and HOD for successfully organizing one week webinar series on Metallurgy and Material Science 2024 during 22/42024 to 26/4/2024.

Received special appreciation from advisor KCG for highly esteemed contribution in planning implementation and organizing mega placement camps in all districts of Gujarat during Jan-Mar 2024.

Worked at audio visual committee during Vibrant Gujarat-2024 09-13 January 2024 at Helipad ground, Sector-17, Gandhinagar.

Contributing for development of state level internship and apprenticeship cell for technical institutes organized by CTE, Education department, Govt. of Gujarat.

PEDAGOGY SESSIONS

Sr. No	Name of Speaker	Department	Topic Delivered	Date
1	Dr. P. K. Nanavati	Metallurgy	Understanding Project / Client spec. preparation of weld plan/map & documentation	27/06/2024
2	Dr. D. G. Sharma	Metallurgy	Fundamentals of Laser, Laser cutting & engraving	28/06/2024
3	Prof. D. V. Mahant	Metallurgy	LASER welding process	29/06/2024

GLIMPSES OF EXPERT LECTURE

Expert talk "Role of Professional societies in the Carreer of Engineering students" at Metallurgy Department, Government Engineering College, Gandhinagar on 18.03.2024 by Dr. Sunil Kahar, Chairman, IIM Baroda Chapter which was coordinated by Dr. D G Sharma.

Students and aculty menbers of metallurgy department hav taken advantage of the expert talk .







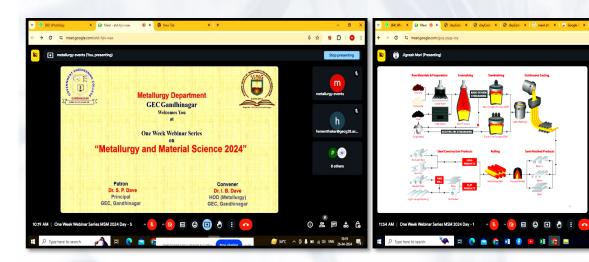
GLIMPSES OF "WEBINAR SERIES"

Under the guidance of Dr. S. P. Dave, (Principal, GEC Gandhinagar), Metallurgy department, GEC Gandhinagar has organized one week online webinar series on "Metallurgy & Material Science" in association with alumni association Students Society of Metallurgy Engineers Gandhinagar during 22/04/2024 to 26/04/2024, 10:30 AM onwards.

This webinar was organized by Prof. H. H. Thakar and Dr M. S. Dani Motive of this event was to give exposure to students and make them familiarize with various advancement and research in metallurgy by giving online expert lectures.

The webinar series was inaugurated on 22/04/2024 10:30 AM PM by Dr. I. B. Dave, HOD Metallurgy Dept. and Prof. H. H. Thakar, Assistant professor, Metallurgy Department, GEC Gandhinagar. More than 60 participants like current students and alumni were remain present. Online practical session and expert lectures were given on various topics of metallurgy during this event. Uniqueness of the event was the expert speakers, being alumni of the department and currently working on remarkable positions in reputed industries.

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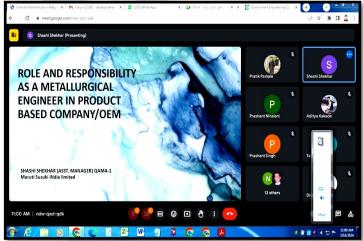
Sr. No.	Date	Expert Details	Торіс
1	22/04/2024	Mr. Jignesh Mori Metallurgy Faculty, AMNS Ind. Ltd. Surat	"Effects of Normalizing on Mechanical Properties and Microstructure of CS and HSLA Welding Consumables"
2	23/04/2024	Mr. Mayur Mandlik Technical Manager, Milestone Engineering Services, Kalol	"Basic Awareness for Mechanical and Metallurgical Testing"
3	24/04/2024	Ms. Neelam Sompura Lecturer, Metallurgy dept. Govt. Polytechnic Rajkot	"Introduction to High Entropy Alloys"
4	25/04/2024	Mr. Asif Mansuri MD, Thermotronix Engineering PVT LTD. Ahmedabad	"Emerging Trends and Opportunities in the Non-Ferrous Metal Market"
5	26/04/2024	Ms. Riddhi Shukla PhD Scholar, Tal Tech Tallinn Uni of Estonia, Europe	"Metallurgy in Additive Manufacturing"

GLIMPSES OF "ALUMNI MEET MARCH 2024"

The Department of Metallurgy Engineering have organized an expert talk by Alumni in this meeting for all current batches and pass out students on 16/03/2024 11:00 am onwards. The meeting started at 11:00 am with welcome introduction by Metallurgy Department in charge HOD Prof. S I Patel followed by wlcome address by Dr. D G Sharma. The event was enjoyable and simultaneously profitable in terms of providing career as well as technical guidance to the current enrolled students.

Alumni Experts and faculty members have shared the memories, Faculty members from Metallurgy Engineering. Total 39 members such as alumni, faculties and current students have attended the alumni meet which was organized by Prof. H H Thakar. At the end, Dr. D G Sharma, sincerely expressed vote of thanks to honorable Principal Madam, Dr. I B Dave sir Head of Metallurgy Department for their guidance and support to make this event a grand success and thanks to student members of SSMEG and Dr. D G Sharma for background support, all Faculties, students ,Staff Members of metallurgy Engineering department and Alumni for attending Alumni Meet.

Sr. No.	Time	Name of Ex- pert	Detail of Expert	Title of Topic
1	11:00 am to 11:45 noon	Mr. Shashi Shekhar	Alumni student batch 2020 pass out GECG, Metallurgy Department Asst. Manager Maruti Suzuki India Ltd.	"Role and responsibility as a Metallurgy Engineer in product based Companies/OEM"
2	11:45 am to 12:30 pm	Mr. Saunak Thakkar	Alumni student batch 2018 pass out GECG, Metallurgy Department Business Development Manager Think North Management Consultants	"Management lessons in your professional career"
3	12:30 am to 1:00 pm	Mr. Varun Mishra	Manager – Sales Outreach Namtech, AMNS India	"Higher Education op- portunities in smart manufacturing"







"STUDENT ACTIVITES"

Students attended Vibrant Gujarat Global Summit (VGGS). The 10th Vibrant Gujarat Global Summit (VGGS) was held from January 10 to 12, 2024, at Mahatma Mandir Convention and Exhibition Centre in Gandhinagar, Gujarat, India. The Vibrant Gujarat Global Summit (VGGS) 2024, held from January 10 to 12 in Gandhinagar, focused on the theme "Gateway to the Future." This 10th edition of the summit highlighted new-age industries poised to shape the future, with a significant emphasis on semiconductor manufacturing, renewable energy, and green hydrogen. Key highlights of VGGS 2024 included major investments and partnerships in semiconductor and renewable energy sectors. Notably, Micron Technologies and Tata Sons announced significant developments in semiconductor manufacturing. Additionally, Tata Power Renewable Energy Ltd and other companies committed substantial investments to renewable energy projects across Gujarat. The summit also saw the Abu Dhabi Investment Authority becoming the first sovereign fund to set up a base in Gujarat's GIFT City, showcasing the region's growing appeal to international investors. The event featured participation from various global leaders and industry executives, reinforcing Gujarat's position as a leading investment destination in India.





"STUDENT ACTIVITES"

Students participated in cleanliness drive organized by a NGO named Umeed Foundation. Students were equipped by tools used for cleaning such as garbage bags, gloves, etc and they cleaned the premises near Mahudi Road- Kailashdham, Gandhinagar.



STUDENT ACHIEVEMENTS

For being semester toppers in GTU exams Nayan Khante (220133121012) and Chetan Lavhe (210130121513) was awarded appreciation certificate in presence of Principal GEC Gandhinagar on 26/1/2024.





"STUDENT ACHIEVEMENTS"



It was a proud moment for Metallurgy department GEC Gandhinagar as final year student Ms. Diya Churakkate (190130121001) has been awarded Gold Medal by GTU at 13th annual convocation held on 21/01/2024.



Chirayu Pande (200130121004) received a Certificate of Achievement for winning the Best Paper Presentation Award under the Symposium session of Environment Assisted Cracking.

TITLE OF PAPER-, Analysing Hydrogen Embrittlement Challenge for Hydrogen Storage and its Utilization in Industries. He also received Certificate of Participation for The Metal Casting: Lost-Wax Technique in Archaeology



It is the proud moment for Metallurgy department that student from 8th semester; Chetan Lavhe (210130121513) have cleared GATE 2024 examination with AIR 619 in Metallurgy.

TECHNICAL/ INDUSTRIAL VISIT

1. IFTARC Training

Students of GEC, Gandhinagar are rejoiced to have hands-on training on foundry practices which is one the most crucial subjects considered in material manufacturing processes. The 2 days training programme was contained of sand-casting process and hands-on the foundry equipment. A total number of 21 students were in this training program which is divide in groups for various activity such as sand preparation, sand testing, mould making and melting and casting. This event took place between - 4 March 2024 - 5 March 2024. At end of this 2-day training/workshop students were expected to learn more about how casting is done, what are the uses of sand casting and how we prepare sand mould and from that how casting is created and students of GEC, Gandhinagar didn't disappoint the faculties member over at Indus University.









2. Academic Visit at FCIPT Gandhinagar

Students of 6th semester Metallurgy department GEC Gandhinagar had recently visited FCIPT (Facilitation Center of Industrial Plasma Technologies) related to our curriculum of subject Heat Treatment and topic carburizing and its types with our mentors Dr. Minal Dani and Prof. Bhavesh Rana.

In this visit as faculty guide of FCIPT Dr. Alphonso Joseph mam gave us a brief introduction about carburizing and its types with the help of powerpont presentation. After presentation Akash sir and Ghanshyam sir gave us brief introduction about carburizing equipment's and furnace used for carburizing.







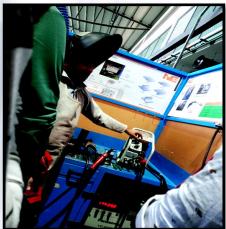
TECHNICAL/ INDUSTRIAL VISIT

3. International Automobile Centre of Excellence (IACE) Welding traning

Students of GEC, Gandhinagar are rejoiced to have hands-on training on welding which is one the most crucial subjects considered in material joining processes. The whole 5 days training programme starting from 12-02-2024 to 17-02-2024 was engulfed around workshop and classroom sessions where daily 1-2 hrs of classroom session of experts in that fields whilst rest of the remaining hrs for project work and hands-on the welding machines. The activities were planned on the basis of equal hours of theory and practical knowledge that's where the perfect coalescence meets as of welding definition. A total of 23 students were in this training program. Inauguration by Diglnitaries Introduction- IACE and Safety protocols of Center. Setting the context Think like an Engineer & Study of Corrosion with breakfast was one the aim as to kick start the first day. Preltraining assessment in the training hall and from 10:30 to 5 pm was the time where we were taught methods of measurement. Pre-training assessment Measurement Practical (Plate). Theory on spark test as well as hands-on it was demonstrated and applied into practice. Introduction to gas cutting & grinding and especially safety and hands on that equipment using was main aim of the people who were present over there. Types of Welding - SMAW, MIG & TIG process, power source & equipment and one of the major attraction at IACE is the stimulation software practice on Welding Simulator. Types of Welding Position & Joints. Electrode & filler material and Welding Practice on Actual Power Source as well we were given the opportunity to interact with many industrial traits at the same time. Welding metallurgy. Preheating & Post heating during welding and Welding Practice on Actual Power Source and was given lecture on awareness in welding areas. Types of Welding Defects, Causes & Remedy and Welding Practice on Actual Power Source and also that was the day where we started doing project to make fabricated tables and chairs. EHS (Environment, Health and safety) at industry level as of our project. DT, NDT & X-ray film review and the hands-on practice of those tests and one of the major advantages for Metallurgy students. Automation in Welding and also principles of how welding can be done by automated welding robots. Presentation tropics based on what we have learnt from welding including soft skills and we were made to present that on stage. Post-training assessment & Review in the training hall Feedback on training and the prize distribution ceremony was conducted under the hands of Head of Welding Trainer at IACE Ranveer Singh and gave an important lifelong and learning lesson whilst handing









RESEARCH ACTIVITIES

Research Paper counter	Previously published	Addition	Total
(Jan 2019 onwards)	50	2	52

Sr. No.	Title of the Paper	Authors	Conference/ Journal
1	Analyzing Hydrogen Em- brittlement Challenges for Hydrogen storage and it's utilization in industries	Chirayu Pande, Rahul Yadav, Sarvesh Gur- ram, Daulat Kumar Sharma	Symposium session of Environ- mental Assisted Cracking: CORSYM 2024
2	Importance of high strength steels and their welding in petrochemical industries	Hemenkumar H. Thakar; Mrunalkumar D. Chaudhari; Jaykumar Vora	Journal of AIP conference pro- ceedings, 2960, 030008 (2024), January 2024

MEDIA COVERAGE



સરકારી ઈજનેરી કોલેજ સેકટર-૨૮ ખાતે આચાર્યા ડૉ. એસ. પી. દવેના માર્ગદર્શન હેઠળ સાપ્તાહિક વેબીનાર મેટલર્જી એન્ડ મિટિરિયલ સાયન્સનું મેટલર્જી વિભાગના ભૂતપૂર્વ વિદ્યાર્થીઓ સંયોજન (સ્ટુડન્ટ સોસાયટી ઓફ મેટલર્જી એન્જીનિયરીંગ ગાંધીનગર) હારા કરવામાં આવ્યું હતું. તાલીમના સંયોજક મેટલર્જી વિભાગના પ્રાધ્યાપકો પ્રા. એચ. એચ. ઠાકર તથા ડૉ. મીનલ દાણી હતા. આ વેબીનારનો મુખ્ય હેતુ વર્તમાન પરિસ્થિતીમાં વિદ્યાર્થીઓને મેટલર્જી વિષયમાં ઔધ્યોગિક તથા રીસર્ચ ક્ષેત્રે થયેલ એડવાન્સમેંટથી માહિતગાર કરવાનો હતો.



PLACEMENTS

Sr. No.	En. No.	Name of Student	Name of Industry/ Institute	Annual Package (INR)
1	200130121510	Rahul Yadav	Sunray Laboratory	700000
2	200130121006	Kishan Jetani	Adani Enterprises Ltd.	650000
3	210130121504	Nihar Ravindra Huprikar	Tecnimont Pvt Ltd	550000
4	210130121506	Manthan Santosh Pune	Tecnimont Pvt Ltd	550000
5	210130121510	Harshal Sanjay Shivankar	Godrej & Boyace Ltd.	460000
6	210130121518	Rohit Sharan Kodle	Godrej & Boyace Ltd.	460000
7	210130121523	Chetan Rajkumar Badwaik	Godrej & Boyace Ltd.	460000
8	210130121513	Chetan lavhe	Schaeffler Ind. Pvt. Ltd.	450000
9	210130121515	Amol Gonge	Schaeffler Ind. Pvt. Ltd.	450000
10	210130121514	Nana Pawar	Welspun Corp.	425000
11	210130121516	Shivam P. Jani	Welspun Corp.	425000
12	210130121507	Sagar Bakhade	Jailaxmi Steels	360000
13	210130121511	Abhishek Dnyandeo Darade.	Jailaxmi Steels	360000
14	210130121512	Prathmesh Thadke	Jailaxmi Steels	360000
15	210130121525	Rushank Milind Dhande	Jailaxmi Steels	360000
16	210130121501	Mishra Dipak M.	Bunitech	264000
17	210130121503	Manthan Kasundra	Bunitech	264000
18	210130121505	Bhut Jigarkumar P	HMH Metal Industries	TBA
19	200130121008	Patel Smit HareshKumar	Self employed	













SCHAEFFLER

70 % ARE ALREADY PLACED...... AND ITS NOT OVER YET!

TRAINING/INTERNSHIP (12 WEEKS)

During January—April 2024, all the students of 8th semester Metallurgy, have undergone 12 weeks internship program in reputed industries as listed below as a part of GTU curriculum.

Sr. No.	En. No.	Name of Student	Name of Industry/Institute
1	200130121004	PANDE CHIRAYU VILAS	INDIAN INSTITUTE OF TECHNOLOGY, GANDHINAGAR
2	200130121005	GUNJIL MANISHIKANT BHAVSAR	INDIAN INSTITUTE OF TECHNOLOGY, GANDHINAGAR
3	200130121006	JETANI KISHANBHAI VIRJIBHAI	METALX TESTING FACILITIES
4	200130121007	SOLANKI DHAVALSINH NARENDRASINH	OCEAN STEELS PVT. LTD.
5	200130121008	PATEL SMIT HARESHKUMAR	STYRO STEEL CAST PVT. LTD.
6	200130121510	YADAV RAHUL PRAMOD	BHILAI STEEL PLANT (SAIL)
7	210130121501	DIPAK MISHRA	UNITECH METALLURGICAL SERVICES, CHANGODAR, AHMEDABAD
8	210130121503	KASUNDRA MANTHAN	UNITECH METALLURGICAL SERVICES, CHANGODAR, AHMEDABAD
9	210130121504	HUPRIKAR NIHAR RAVINDRA	INDIAN INSTITUTE OF TECHNOLOGY, GANDHINAGAR
10	210130121505	BHUT JIGARKUMAR PRAVINBHAI	JAY METAL TECH. SURAT
11	210130121506	MANTHAN SANTOSH PUNE	CIE AUTOMOTIVE INDIA LTD. (FORMERLY KNOWN AS MAHINDRA CIE AUTOMOTIVE LTD)
12	210130121507	BAKHADE SAGAR DNYANESHWAR	JAI LAXMI CASTING AND ALLOY PVT LTD
13	210130121508	MITTAL MAHENDRA KHAIRNAR	BHAGWATI SPHEROCAST PVT. LTD
14	210130121509	GHODKE GANESH NARAYAN	KALYANI TECHNOFORGE LTD.
15	210130121510	SHIVANKAR HARSHAL SANJAY	UNITECH METALLURGICAL SERVICES, CHANGODAR, AHMEDABAD
16	210130121511	DARADE ABHISHEK DNYANDEO	JAILAXMI CASTING AND ALLOYS PVT LTD.
17	210130121512	THADKE PRATHMESH PRAKASH	JAILAXMI CASTING AND ALLOYS PVT LTD.
18	210130121513	LAVHE CHETAN BALASO	INDIAN INSTITUTE OF TECHNOLOGY, GANDHINAGAR
19	210130121514	PAWAR NANA BHAUSAHEB	JAILAXMI CASTING AND ALLOYS PVT LTD
20	210130121515	GONGE AMOL PANDURANG	INDIAN INSTITUTE OF TECHNOLOGY, GANDHINAGAR
21	210130121516	JANI SHIVAM PRAKASHBHAI	METALX TESTING FACILITIES
22	210130121517	GURRAM SARVESH ANIL	TATA MOTORS LTD.
23	210130121518	KODLE ROHIT SHARAN	TATA MOTORS PVT LTD
24	210130121519	BORICHA PRIYANK SANJAYBHAI	SATYAY TECHNOCAST PVT.LTD.
25	210130121520	JANI YASH KIRITBHAI	JAY METAL TECH. SURAT
26	210130121521	MANEKAR PRANAY RAJENDRA	JAILAXMI CASTING AND ALLOYS PVT. LTD
27	210130121522	NATKAR MOHIT SURESH	JAILAXMI CASTING AND ALLOYS PVT. LTD
28	210130121523	BADWAIK CHETAN RAJKUMAR	JAILAXMI CASTING AND ALLOYS PVT. LTD
29	210130121525	DHANDE RUSHANK MILIND	JAILAXMI CASTING AND ALLOYS PVT. LTD

TRAINING/ACTIVITY ATTENDED BY FACULTY

Sr.no	Name of Faculty	Title of Training/Activity	Duration	Organizer
	Dr. I. B. Dave	Letter of Appreciation for delivering highly informative lectures on "Introduction to Manufacturing Processes"	19/02/2024	Metallurgy Department of Dr. S. and S.S. Ghandhy College of Engg. And Tech., Surat
1		Letter of Appreciation for delivering highly informative lectures on "Friction Stir Processing (FSP)-Manufacturing Technique"	19/02/2024	Metallurgy Department of Dr. S. and S.S. Ghandhy College of Engg. And Tech. , Surat
	Di. i. b. Dave	Certificate of Participation in attending online webinar on "The Value of ChatGPT in Teaching and Learning"	07/03/2024	Knowledge Consortium of Gujarat, Education Department, Govt. of Gujarat.
		Certificate of Participation in attending online webinar on "Financial Awareness in Modern Life"	02/04/2024	Knowledge Consortium of Gujarat, Education Department, Govt. of Gujarat.
2	Prof. S. I. Patel	Certificate of Appreciation in recognized and commended for outstanding dedication, exemplary performance and valuable contributions towards organizing the Gujarat Gyan Guru Quiz (G3Q 2.0)	Feb 2024	Education Department Govt. of Gujarat Knowledge Consortium of Gujarat
		Successfully completing the course Learning English in Hindi with a consolidated score of 81%	Jan-Mar 2024	NPTEL-AICTE
	Dr. D. G. Sharma	Certificate of Participation in attending online webinar on "The Value of ChatGPT in Teaching and Learning"	07/03/2024	Knowledge Consortium of Gujarat, Education De- partment, Govt. of Gu- jarat.
		CTE approved certificate of 2 week industrial training on New age technology in Laser Welding and cutting	10/ 6/2024 to 22/06/2024	Sahjanand LASER Tech. Ltd., Gandhinagar
		Participation in "Boron Carbide: Manufacturing Technology & Applications in Defence and Nuclear Industry"	04/01/2024	ASM International, Gu- jarat Chapter
3		Participation in academic Integration program at NAMTECH	07/03/2024	IIT Gandhinagar
		Certificate of Participation in webinar on"Financial Awareness in Modern Life"	02/04/2024	Knowledge Consortium of Gujarat, Education Department, Govern- ment of Gujarat.
		Certificate of Participation in webinar on "The Role of Entre- preneurship and Innovation in Economic Development"	26/04/2024	Knowledge Consortium of Gujarat, Education Department, Govern- ment of Gujarat.
		Certificate of Participation in webinar on "Investment in the Stock Market, Mutual Fund & SIP for Future Goals"	22/05/2024	Knowledge Consortium of Gujarat, Education Department, Govern- ment of Gujarat.

TRAINING/ACTIVITY ATTENDED BY FACULTY

Sr	r.no	Name of Faculty	Title of Training/Activity	Duration	Organizer
4		Prof. D V Mahant	Participation in "Boron Carbide: Manufacturing Technology & Applications in Defence and Nuclear Industry"	04/01/2024	ASM International, Gujarat Chapter
	4	Froi. D V Manant	CTE approved certificate of 2 week industrial training on New age technology in Laser Welding and cutting	10/ 6/2024 to 22/06/2024	Sahjanand LASER Tech. Ltd., Gandhina- gar
	5	Prof. H. H. Thakar	Certificate of Appreciation for planning, implementation and organizing Mega Placement Camps in all Districts of Gujarat Organized by Placement Cells, Department of Education, Government of Gujarat for the year of 2023-2024	31/03/2024	Education Department Govt. of Gujarat KCG-Ahmedabad

CERTIFICATES EARNED BY STUDENTS

Sr.no	Name of Stu- dent	Title of Training/Activity	Duration	Organizer
1	Diya Churakkate	Metallurgist Gold Medallist Batch 2023	21/01/2024	Gujarat Technological University
2	Nayan Khante	CERTIFICATE OF APPRECIATION- securing highest SPI (8.32) B.E. (METALLURGY) in semester 4 during Academic Year 2022-2023.	26/01/2024	Metallurgy Department Gec-Gn
3	Chetan Lavhe	CERTIFICATE OF APPRECIATION- securing highest SPI (9) B.E. (METALLURGY) in semester 6 during Academic Year 2022-2023.	26/01/2024	Metallurgy Department Gec-Gn
4	Chirayu Pande	CERTIFICATE OF ACHIEVEMENT - Won the Best Paper Presentation Award under the Symposium session of Envi- ronment Assisted Cracking . TITLE OF PAPER-, Analysing Hydro- gen Embrittlement Challenge for Hydro- gen Storage and its Utilization in Indus- tries	17/02/2024 to 18/02/2024	The M.S.U of Baroda ,Vadodara
		CERTIFICATE OF PARTICIPATION- The Metal Casting: Lost-Wax Tech- nique in Archaeology	02/03/2024 to 03/03/2024	IIT Gandhinagar
5	Nihar Huprikar	CERTIFICATE OF PARTICIPATION- The Metal Casting : Lost-Wax Tech- nique in Archaeology	02/03/2024 to 03/03/2024	IIT Gandhinagar

TECHNO RIDE

- By Mr. Arzoo Bhalodiya (210130121009)

Microporous and Mesoporous Materials from Natural and Inexpensive Sources

ABSTRACT:-

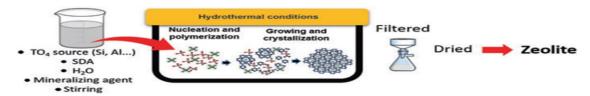
This technical artical will attempt to describe microporous and mesoporous materials, such as zeolites, and ordered mesoporous materials, which are versatile solids that are used for the environmental remediation and energetic efficiency and the applications in wastewater treatment and nuclear waste, purification and separation, medicine and catalysis. These materials are constructed from tetrahedral units, TO4 (where T is silicon and aluminum, usually), which are usually obtained from commercial sources. Furthermore, strategies and green approaches are described to contribute to the reduction of the cost production using cheaper and renewable raw materials such as rice husk, diatoms, coal ash, and clay minerals, which are potential and attractive sources of silicon and aluminum for the synthesis of zeolite and ordered mesoporous materials Keywords: microporous and mesoporous materials, wastewater treatment, zeolites, ordered mesoporous materials.

INTRODUCTION:-

Micro- and mesoporous materials are high-performance solids, and their pore sizes and unique structures allow interaction with atoms and ions as well as separation, processing or hosting of molecules of high scientific and technological interest. In general, porous materials must have two characteristics: many pores and pores that provide an optimized action for the performance of the material. Since pores of different sizes exist, the IUPAC classified them according to their size range. Materials with pore sizes up to 50 nm are called macroporous. Materials with pore sizes between 2 and 50 nm are called mesoporous, and materials with pores sizes smaller than 2 nm are called microporous. In addition, the term nanoporous material covers materials that have pores up to 100 nm. The best-known class of microporous materials is called zeolites, and the class of materials with pore sizes in the mesoporous region is called ordered mesoporous materials. The channels and cavities of these materials are able to separate molecules according to their different sizes, showing shape selectivity (molecular sieving), attractive capacity of adsorption, ionic exchange, and catalytic properties applied in environmental remediation and energy efficiency. Both zeolites and ordered mesoporous materials are constructed from tetrahedral units (TO4, where T is silicon and aluminum, usually), and the different spatial orientations of these units and their connections generate channels and cavities. This technical artical will discuss the importance of these materials for reducing environmental problems, and how they can be synthesized via an eco-friendly synthesis using renewable, abundant, and cheap silicon and aluminum sources.

ZEOLITES:-

The term zeolites is derived from the Greek Zeo (boiling) and Lithos (stone), referring to the interesting observation made by Crönstedt of the natural mineral stilbite, the first zeolite discovered by him, which releases steam when subjected to heating in a flame. Today, it is known that the effect occurred due to desorption of water, which is present inside its channels and cavities. Zeolites are crystalline materials that are composed of tetrahedral TO4 (T = Si, Al, among others such as P, Ge, Ti, Fe, Ga) interconnected by oxygen atoms. Zeolite formation is a complex process, and factors such as the mode of preparation, nature, and order of the added reactants and the molar composition influence the final product. Thus, it is not wrong to say that most of the zeolites obtained via synthetic routes were based on trial and error. Several mechanisms of zeolite synthesis are proposed, but they all converge on one main idea: the formation of zeolites occurs via phase transformation of the initial reactants in amorphous form into a crystalline microporous product using solution-mediated crystallization or solid transformation.



APPLICATIONS OF ZEOLITES AND ORDERED MESOPOROUS MATERIALS:-

Due to the properties of adsorption, ion exchange capacity, molecular sieving and acidity, zeolites and ordered mesoporous materials have applications in several areas, as follows:

Wastewater Treatment Nuclear Waste and Fallout Medical Purification and Separation of Gases Catalysis

REFRENCES:-

Microporous and Mesoporous Materials from Natural and Inexpensive Sources Anderson Joel Schwanke, Rosana Balzer, and Sibele Pergher R. Balzer Departamento de Exatas e Engenharias, Universidade Federal do Paraná – UFPR, Curitiba, PR, Brasil

TECHNO RIDE

- By Mr. Pratik Parkale (220133121016)

<u>Titanium Coagulants in Water Purification and Water Treatment</u> <u>Processes in Additive Manufacturing</u>

ABSTRACT:-

Considerable attention is paid to improving the environmental safety of additive manufacturing. Manufacturing of articles from titanium using additive technologies (powder metallurgy) is characterized by a high water consumption, and, thus, a large amount of wastewater generated. The paper presents the main trends of using titanium compounds as coagulants for the treatment of natural water (treatment to industrial water grade) and wastewater from additive manufacturing of articles from titanium. It was ascertained that in the processes of wastewater and recycled water treatment, titanium-containing coagulants are much better that the traditional coagulants based on aluminium and iron salts. Treatment of water from surface sources to industrial water grade using titanium coagulants is also highly efficient, and the residual concentrations of pollutants are on average 2.0 - 3.0 times lower than when using the traditional reagents. The use of titanium salts as coagulants allows an average 2-fold reduction of reagent consumption. Coagulation sludge (sediment) forming in the course of water treatment is titanium dioxide and can be used in future as a raw material in different industries. Keywords: Water Purification, Titanium Coagulants, powder metallurgy.

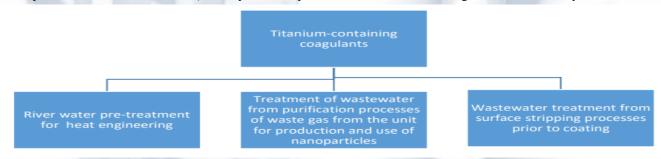
INTRODUCTION:-

The growing level of industrial development brings about a demand for materials with innovative properties. Currently, powder metallurgy (additive technologies) is considered as one of the most potential trends in metallurgy, which allows manufacturing the articles of complex shapes having specific properties. The demand for additive manufacturing, technologies and materials is growing each year. Regardless of the coating production method applied: electron beam melting of material, laser melting, etc., additive manufacturing uses clean fresh water for cooling the heating equipment and contact surfaces as well as for hydrotreating or gas purification of the surfaces of articles. In some cases, deep treated water is used when operating the units with water atomization (gas atomizer/sprayer). Requirements to the quality of water used in additive and metallurgical production processes are quite stringent, and treated water should have the minimum content of hardness salts, iron, chlorides and aggressive gases (oxygen, carbon dioxide).

Water treatment processes are, as a rule, limited to reactant treatment for reducing the content of suspended matter. That is why, increasing the efficiency of suspended matter removal is an extremely urgent task. Commonly salts of iron (chloride) or aluminium (sulfate/oxychloride) are used for coagulation water treatment. Despite their high efficiency, these reagents have a number of significant disadvantages. This situation can be overcome using titanium-containing coagulants which demonstrated an extremely high efficiency (at dosages 50-60% lower compared to traditional coagulants) in wastewater treatment in different industries, surface water treatment processes, water treatment before the reverse osmosis desalination system and other water treatment processes. Among the main advantages of titanium-containing reagents are their lower dosage, and, therefore, the minimal secondary contamination of water with coagulant ions, and a wide range of operating water pH and temperature values.

EXPERIMENTAL PROCEDURE:-

The main goal of the work is to assess the possibility of using titanium-containing reagents in water purification and water treatment processes for the needs of additive manufacturing working with titanium compounds. The choice of production is determined primarily by the similarity of the reagent for water purification/water treatment and the material used (the forming pollutants consist of 99% titanium compounds). Coagulation efficiency was assessed on a laboratory flocculator JLT 4 (VELP) following the standard Jar-Test procedure. As part of the study, the effective dosage of various coagulants was selected, and residual content of pollutants in treated water was assessed. Samples of treated water were analysed for the content of dispersed particles using a portable turbidimeter HANNA (HI 98703-02). Color index was determined using a chromium cobalt scale on DR 2800 HACH USA spectrophotometer. The study of elemental composition of coagulation sludge was performed on JEOL 1610LV scanning electron microscope with an energy dispersive spectrometer (point-probe analysis) SSD X-Max Inca Energy (JEOL, Japan; Oxford Instruments, UK). The phase composition was determined using DRON-3 M X-ray diffractometer.



The following coagulants were used:

Aqueous solution of titanium tetrachloride (TiCl4) produced by Merck (Sigma-Aldrich) Aqueous solution of aluminium sulfate (Al2(SO4)3) produced by Kemira (Finland) Aqueous solution of ferric chloride (FeCl3) produced by Kemira (Finland)

REFERENCES:-

Titanium Coagulants in Water Purification and Water Treatment Processes in Additive Manufacturing Kuzin E. N. D. Mendeleev University of Chemical Technology, Russia, kuzin.e.n@muctr.ru

TECHNO RIDE

- By Miss Jahanvi Dave (210130121008)

Leadership Fundamentals - The Vital Signs To Recognize In Great Management

INTRODUCTION:-

We all know when we are being managed well. It's something that feels inherently right. There is the expectation that any obstacles will be removed by a good manager, that this person is working alongside you to put you in a position to succeed. Since 1997, when Amanda Goodall first started to work in academia, her interest in effective leadership and quality management has been a mainstay of her work. She has conducted numerous studies with world-renowned sociologists and leaders in medicine and academia at Cornell, Yale, and the Universities of Zurich and Warwick. She is now an associate professor at Cass Business School. Amanda is the first to admit that social science is datadriven. She has spent 20 years researching and exploring her main hypothesis. She is very forthright when asserting that the best leaders are experts in their field who have not come from typical management or administrative backgrounds. She has set out to confirm this in a variety of studies and to properly analyze and prove this in a way that is more practical than the traditional leadership research, which she describes with frustration as too focused "on the big man, too anecdotal."

BE AN EXPERT FIRST

Her perspective is shaped by her experience working alongside business leaders who had previously been the best in their trade before turning to management. She recognized how magnetic they were to acolytes who were immediately attracted to working with someone who reached the highest peak of their particular field. For example, geneticist Paul Nurse had won the Nobel Prize in Science. He had an extraordinary impact after his appointment to the Francis Crick Institute.

"This has suited the Anglo-American style of management that has been promoted by their business schools," Goodall said. "They teach undergrads in business and management but this is like teaching dentistry to people who have never seen teeth. Germany, for example, has a very different approach in this respect."

"All organizations are different, and it is key that management is intertwined with the business. Managers are fans of management practice while experts tend to reject it as bureaucracy."

WHAT MAKES A PERFECT MANAGER?

Amanda is unequivocal on the criteria that define a great manager. "Credibility and being the best at what they do. Even our work on line managers has found that those who rate their own manager as being an expert are far happier in their role and much more productive," Goodall said.

Line managers have a big influence on employee working life. The best communicate well and are ideally equipped to develop the careers of those they manage. "These people usually adopt a consultative approach and know the right conditions for their workers to thrive and succeed," Goodall said, "and this career development is so crucial for underlying job satisfaction."

"The best managers often just know what to do, and they may not necessarily be hugely inspiring," Goodall said. "It is clear that if you are not a core business expert you have to get into the heads of the people you want to influence. You must know what you don't know about each person you manage. Look at cleaners in hospitals, especially now. They need to be managed by someone who understands them and their world intimately."



Hubris is also a big issue. Goodall said that those who are especially outstanding often assume they are excellent at everything else. This is a common misconception to overcome with formal leadership development. "It is best that they hold a mirror up to themselves and get comfortable with all the personal stuff," Goodall said. "They need to be aware of their own behavior, biases and prejudices. The best leaders have humility, can listen, and are still open to more learning.

MEASURING THE EFFECTIVENESS OF MANAGERS

Goodall is reluctant to lay down any established standard and describes the assessment of management effectiveness as evolving. "It is very hard for many in big enterprises to answer with confidence how their organization is being led when they are so distant from the leaders," Goodall said.

"More relevant is how they are being managed, their view of their work conditions and how fulfilled they are. These are all very good measures here. The other piece that is not to be underestimated is the commitment to training, and continuous development of a real career path."

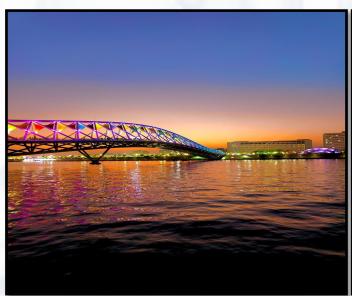
The 10 desirable manager behaviors at Google determined by this study:

- Is a good coach
- Empowers team and does not micromanage
- Creates an inclusive team environment, showing concern for success and well-being
- Is productive and results-oriented
- Is a good communicator, listens and shares well
- Supports career development and discusses performance
- Has a clear vision/strategy for the team
- Has key technical skills to help advise the team

ART GALLARY

PHOTOGRAPHY

- Photography by Mr. Raghav Deshpande (220133121007)







SKETCHES

- By Mr. Vikani Kelvin (200130121001)



ART GALLERY

आओं एक शिक्षित समाज बनाएं

आओं एक-जुटकर होकर सब, एक शिक्षित समाज बनाएं, संकुचित विचारों वाली मानसिकता को, सबके मन से मिटाएं।

> धर्म-जाति का मेल मीटे सब, बस मानव धर्म हो सर्वपरी, जिससे हो सके समाज में, एक नई चेतना और जागृति।

शिक्षित कर विचारों को सबके, मनुष्यता का पाठ पढ़ाकर, आओ सब मिलकर फिर से, अपना कर्तव्य निभाएं।

ऐसे करें जागरूक सबको, जिससे समाज में हो परिवर्तन, शुद्ध,सुदृद्ध मानसिकता के संग, एक नए विश्व का पर्दापण।

एक नए स्वप्न को पूरा करने, एक नया जागरण लाने को, आओ एक संकल्प उठाकर, आगे कदम बढ़ाए।

- Written by Miss Shibbu Singh (210130121010)

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