DWARKADAS J. SANGHVI COLLEGE OF ENGINEERING
Plot No. 13-15, J.V.P.D. Scheme, Bhaktivedanta Swami Marg,
Vile Parle (West), Mumbai-400056.
(Autonomous College Affiliated to University of Mumbai)

A Link Up with Majors (ALUM)

January 4, 2021

On January 4, 2021, DJSCE IIChE hosted its very first event of the year, "A Link Up with Majors (ALUM)- The Guiding Lights to Your Runway into Professional Airspace." As the name suggests, the webinar focused on providing the students with a platform where leaders of today could interact with the leaders of tomorrow. The webinar, which was open to chemical engineering students of D. J. Sanghvi College of Engineering witnessed the partakers express their opinions and thoughts while spontaneously interacting with the Alumni.

Following an intense online semester, the students had not gotten the opportunity to interact with pioneers of the industry due to COVID and DJSCE IIChE was instrumental in providing them with just that! The webinar also outlined a brief picture about future educational and vocational opportunities, which in turn was beneficial for the pupils. The speakers included:

- Neha Patel – Project Manager, Minex Metallurgical Co. Ltd.
- Dr Parth Shah – Consultant Engineer, Process Systems Enterprise.
- Utkarsha Hazarnis - Program Manager, Global Client Operations at Assurant.

The webinar, which was conducted on 'MS Teams' commenced with Gandharva Shelar, Chairperson IIChE, welcoming all the speakers and attendees and giving a brief introduction of the student chapter. The event was divided into three segments, each of which was followed by a brief question/answer session where the floor was open to the participants to get their apprehensions cleared.

Segment 1 – Ms. Neha Patel

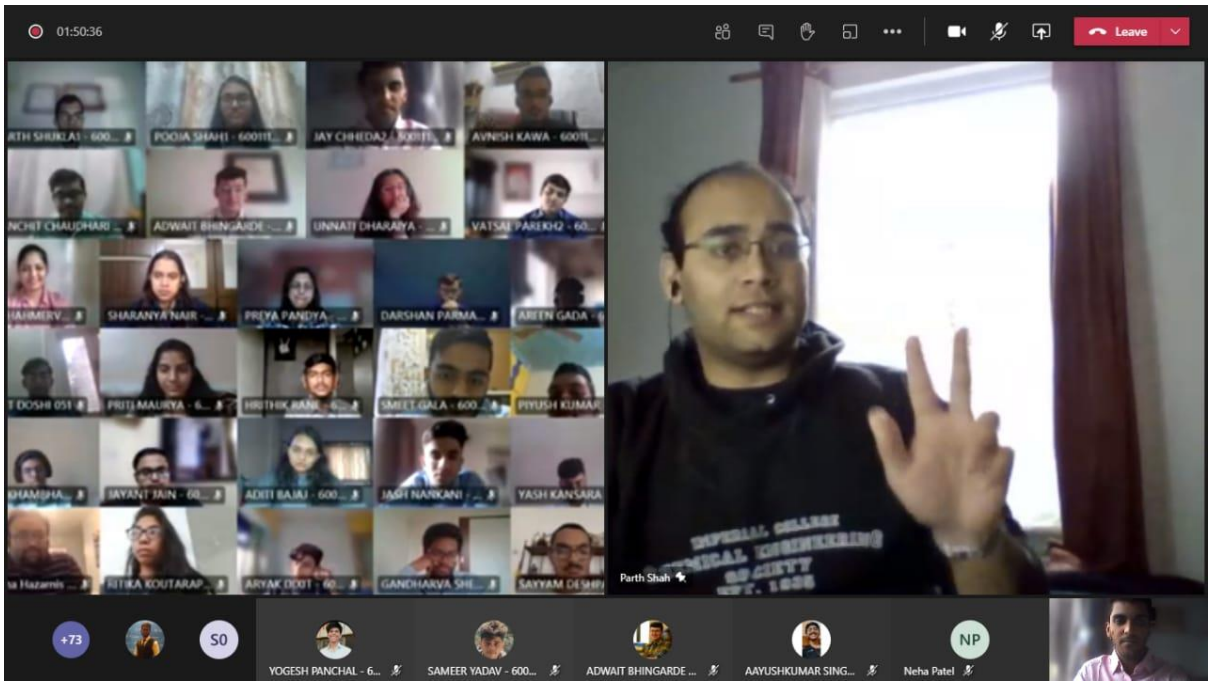
Neha started her talk by making the audience understand her psyche while taking up Chemical Engineering. She said, "Having a pedigree for Chemical Engineers, I too majored in the same in 2006." Further, she even opened up about her unsatisfying experience in working for chemical plants given

her extroverted persona and how doing an MBA in Process Engineering felt more rewarding to her demeanour. However, she affirmed that the experience accentuated her understanding of an organization and acted as a membrane to filter her choices better.

Neha ended her talk by giving a very strong opinion that she felt no qualms in earning a degree from India instead of abroad because 'There isn't any bad choice. It's an investment no matter, and consistency matters the most in the long run.'

Segment 2 – Dr Parth Shah

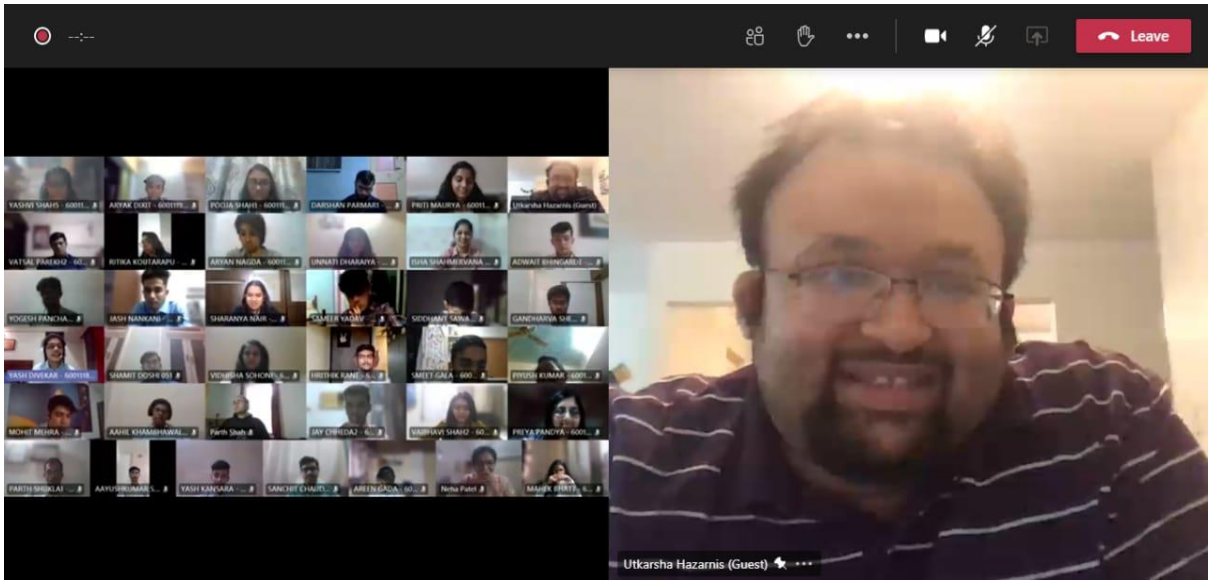
There are a few who just know which path to follow. Such is their conviction and even more profound is their passion. Dr Parth Shah was one among them. While speaking about his academics, Parth recalled his days as a student of PhD in Process Engineering and Process Design at the Imperial College, London and especially, D. J. Sanghvi College of Engineering. He appealed to the audience for working as hard as possible and investing a significant time surfing the internet for assignment related work. Parth emphasised on promoting entrepreneurial thinking simultaneously with steady research and placed his bets on USA, UK and Germany as a hub of opportunities for research-based studies. Having said all this, he even batted for the rising demand in Material Sciences, Environmental Chemistry, Experimentation and Modelling and elucidated the career opportunities in the same.



To end with, Parth called for sensing each possible door to success and said, “Think very hard before saying no to an opportunity.”

Segment 3 – Mr. Utkarsha Hazarnis

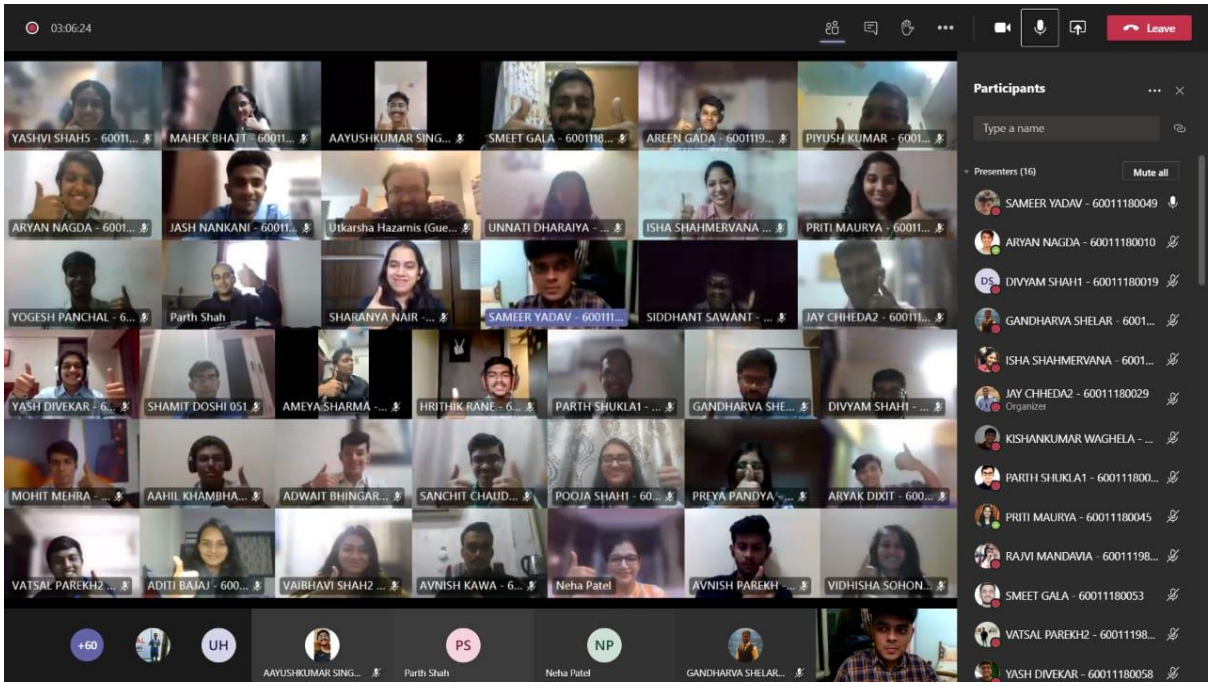
Flaunting a triple Masters’ is not something everyone’s cup of tea, Utkarsh was one among the exceptions. When asked about the story behind him getting three PG degrees, he said, “My company signed me due to my first Masters and sponsored my second. Then the next company hauled me in because of the previous degrees and I landed up studying for a third!”



Utkarsha smilingly spoke about his overhanging H1-B visa troubles and how he turned them into a way to upgrade his skillset. All these qualities made his résumé prolific and at the same time he became an expert at the Lean and Six Sigma model of Program Management. He strongly recommends building a reliable network with other professionals and in day-to-day life alike.

As stated earlier, each segment ended with a Q&A session where the erudite speakers allayed each query of the students and encouraged them to work harder with alacrity.

'A Link Up with Majors,' a first in its kind organised by DJSCE IIChE was a grand success and was attended by a hundred and twenty bubbling students and faculty members including Prof. Rupali Karande, HOD, Chemical Engineering. As the event neared culmination, all three speakers spoke for one last time which was followed with a vote of thanks and presentation of e-mementos. The students had an extremely sanguine feedback about the session and showed interest in attending such fruitful sessions in the future as well.



The Colloquium – Pragmatic insights from the Chemical Industry

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February 13, 2021

Amidst the dire worldwide situation and lockdowns, DJSCE IIChE made it a point to address the needs of the pandemic-struck student fraternity by organising an interactive webinar titled "The Colloquium – Pragmatic insights from the Chemical Industry" on the 13th of February, 2021.

Scepticism and insecurity about their future are all that the students had in mind due to the entire COVID – 19 situation and DJSCE IIChE felt it was essential to address these sentiments of the students and help them by hosting such a cardinal seminar. The webinar was conducted on the "MS Teams" platform and it began with Gandharva Shelar, Chairperson of DJSCE IIChE giving a brief description of the student chapter.

"Dr. Mahesh Murthy" - Senior Manager for Process Safety at SABIC was invited to enlighten the students about the aforementioned topics and provide his insights on the ever-growing chemical industry. Having graduated from SIT Bangalore in 1999, he pursued his master's from Griffith University and was also an alumnus of the Harvard Business School. His educational & occupational strings are threaded through numerous countries including India, such as, Australia, England, U.S.A, Singapore, Canada, Malaysia, Kazakhstan to name a few. Along with SABIC, he has previously worked with companies like Saudi Aramco and Maersk Oil. "37 and still counting" said Dr. Murthy avidly, addressing the nations he has visited which emphasized how he has not limited his learning, application, and experiences by region.

Ye Dil Maange More

Speaking of interlacing subjects, he described his internship at ISRO and pursuing Project Management from the Aviation Department at the Griffith University as 'having null regrets.' "The Aviation Industry had the best Project Management course and so I took that to learn from the best." His viewpoint of diversifying the knowledge base conscientiously being a positive approach was well received by the participants.

Dr. Murthy has always embraced his failures and he has distilled the potential genius of an engineer beautifully at the very beginning of the webinar:

Engineers do not fail in engineering but fail in imagination

- Rex Tillerson, ExxonMobil

Added advice

Dr. Murthy urged us on to be self-centred. Not towards a detrimental effect but the type where you'd develop an aggressive overcoat to your personality, enabling one to chase what can make him/her better.

Every aspiring engineer has **one** characteristic that is a driving force. That characteristic **can** change with time. He shared, how from having a purely scientific mindset, he gradually charted his course via semi-numerics, risk consultancy, financial auditing, and managing people proficiently.

Excerpts from the Presentation

- The Coronavirus pandemic has presented opportunities in equal measure to the threats. Dreaming big and taking calculated risks is what marks a positive change.
- Four factors ultimately support an economic ambition. The ease of doing business, infrastructure, resource security, and generation of skilled human capital.
- India has a huge influx of MNC's.
- A chemical engineer must envision 20 years of his/her career. The very start and the penultimate stage (15 years) are crucial junctures. It can present a complete change in the field or a transition into management.
- One has to figuratively, sell their CV. Technical competency should be supplemented with secondary as well as soft skills. A tangible professional network and a neutral digital footprint are often overlooked areas.
- An able worker has to accommodate personal, job, and social obligations seamlessly.

Career Opinions

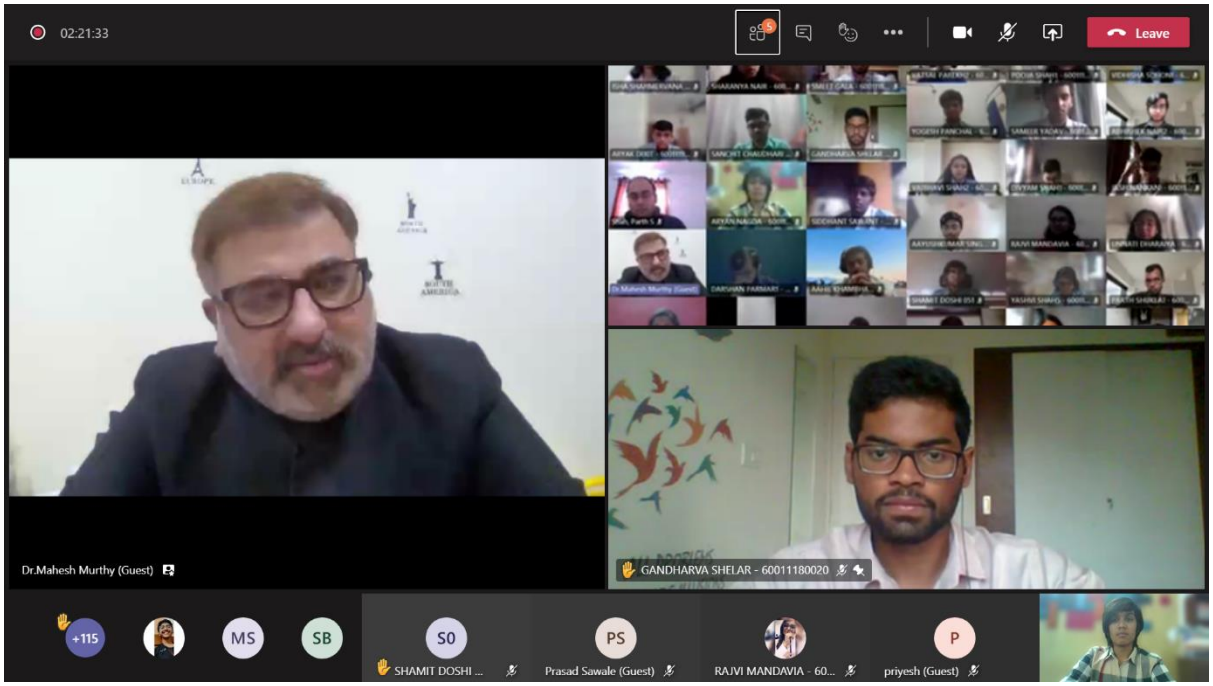
Manufacturing Agri-Chemicals and meeting agricultural self-sufficiency targets in India would certainly present fantastic opportunities. Stimulating growth on deprived soil and land, high altitudes (medicinal mushrooms for example), and the controlled growth of medicinal herbs have seen tremendous interest in recent years.

He dissuades Oil & Gas Exploration options. The current leaders require 8-10 years of expertise. There are several other energy sources and the aim is to keep innovating technologies to shrink conversion barriers.

The Scandinavian countries, Germany & Singapore are worth considering for enrolling in solid waste management studies, recycling practices, and researching biodegradable alternatives.

The meeting, which was facilitated by Gandharva Shelar, Chairperson of DJSCE IIChE separately was attended by more than a hundred and fifty understudies and alumni including Dr. Parth Shah and Ms. Neha Patel. It was concluded with a "Question and Answer meeting where Dr. Murthy tended to the inquiries of students. Finally, a vote of thanks was given to Dr. Murthy along with an e-memento and faculty members were thanked for giving an opportunity to organize such a fruitful webinar. As the webinar ended, the pupils rose with fulfilment. They had extremely sanguine feedback about the session and showed interest in attending such fruitful sessions in the future as well.

Stills from the Event



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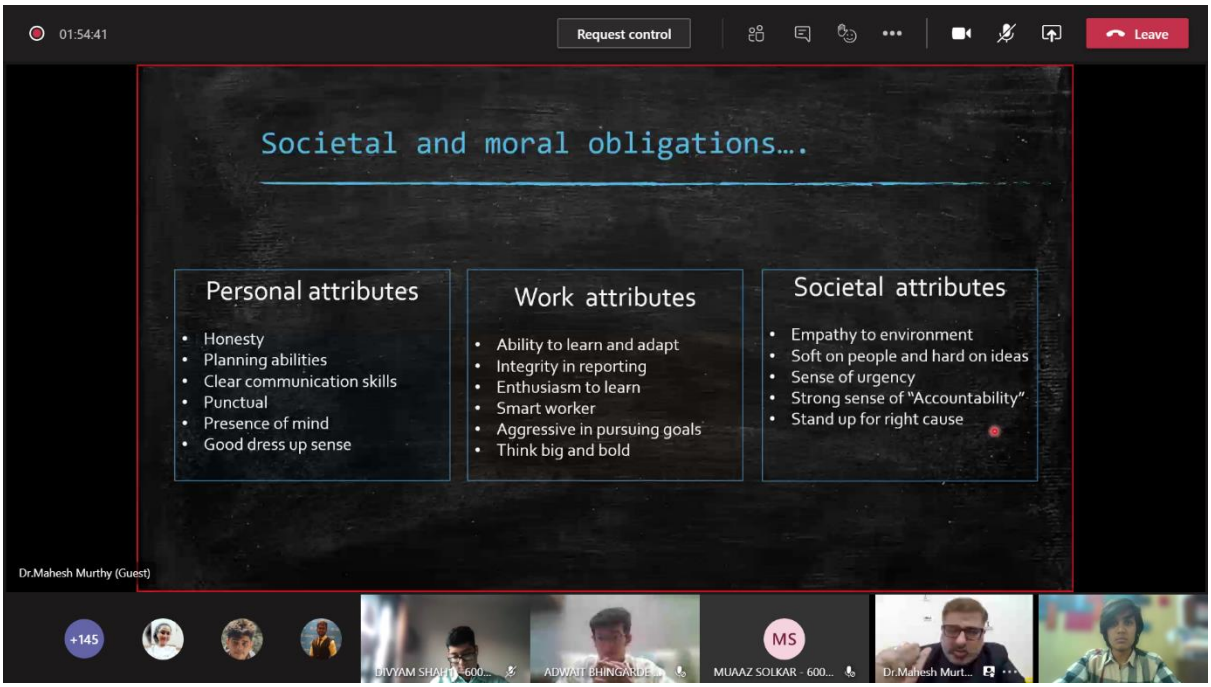

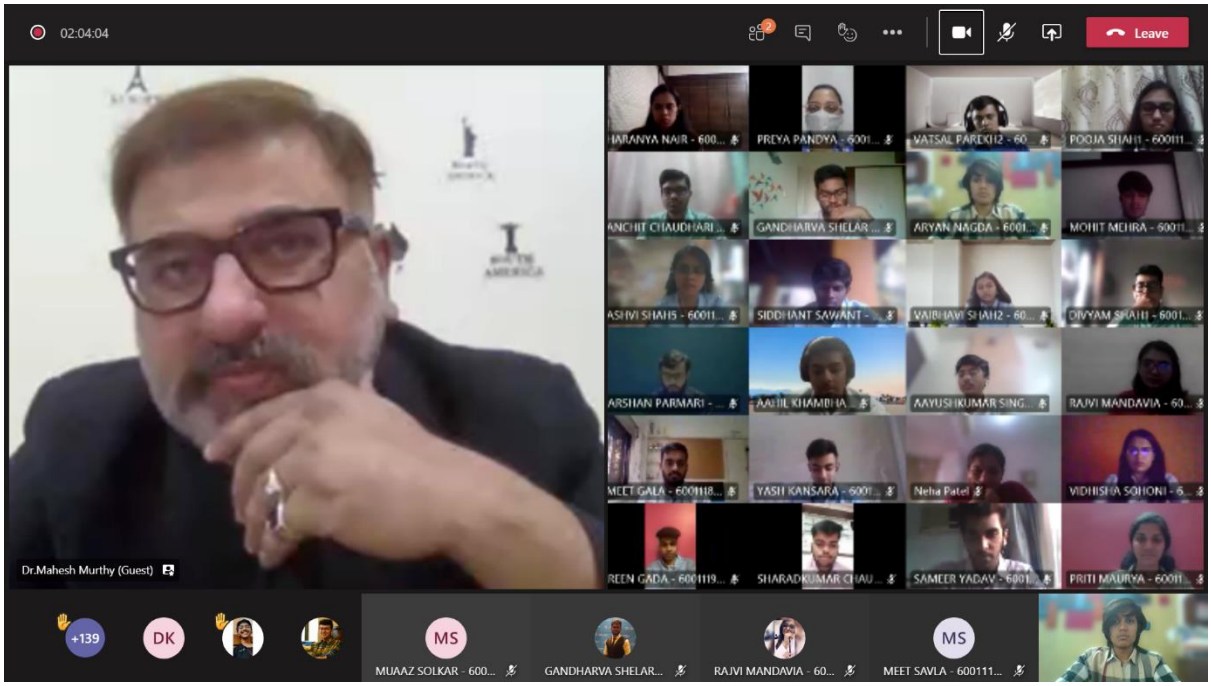

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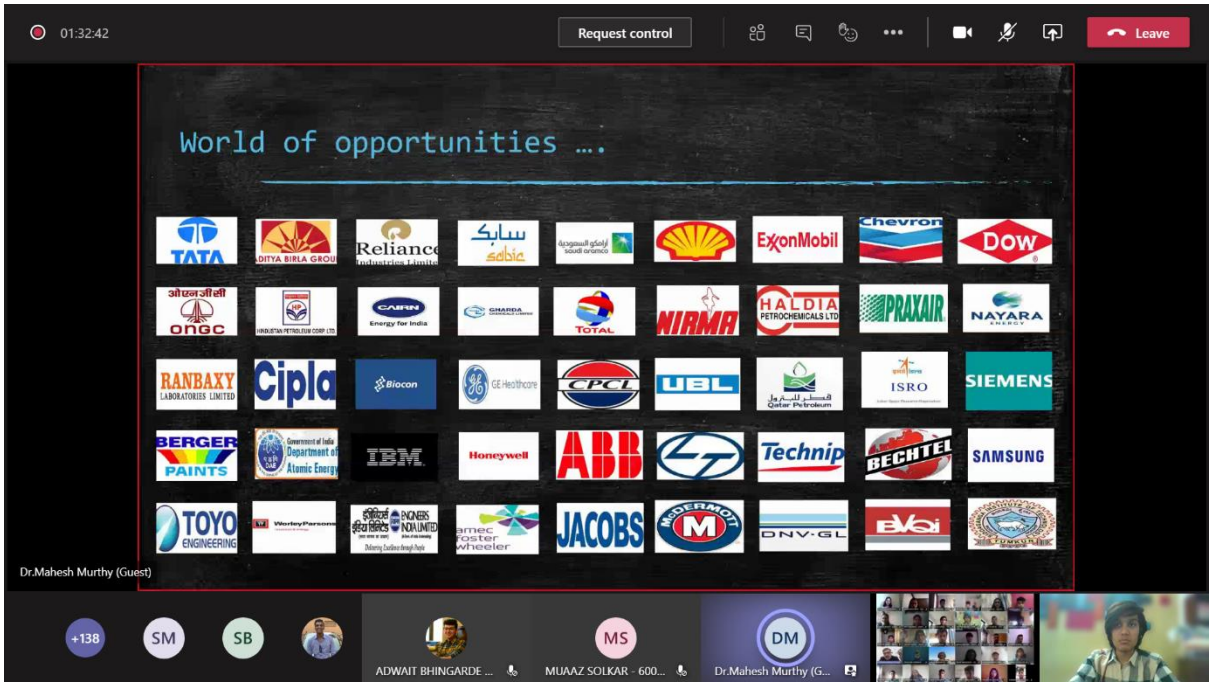

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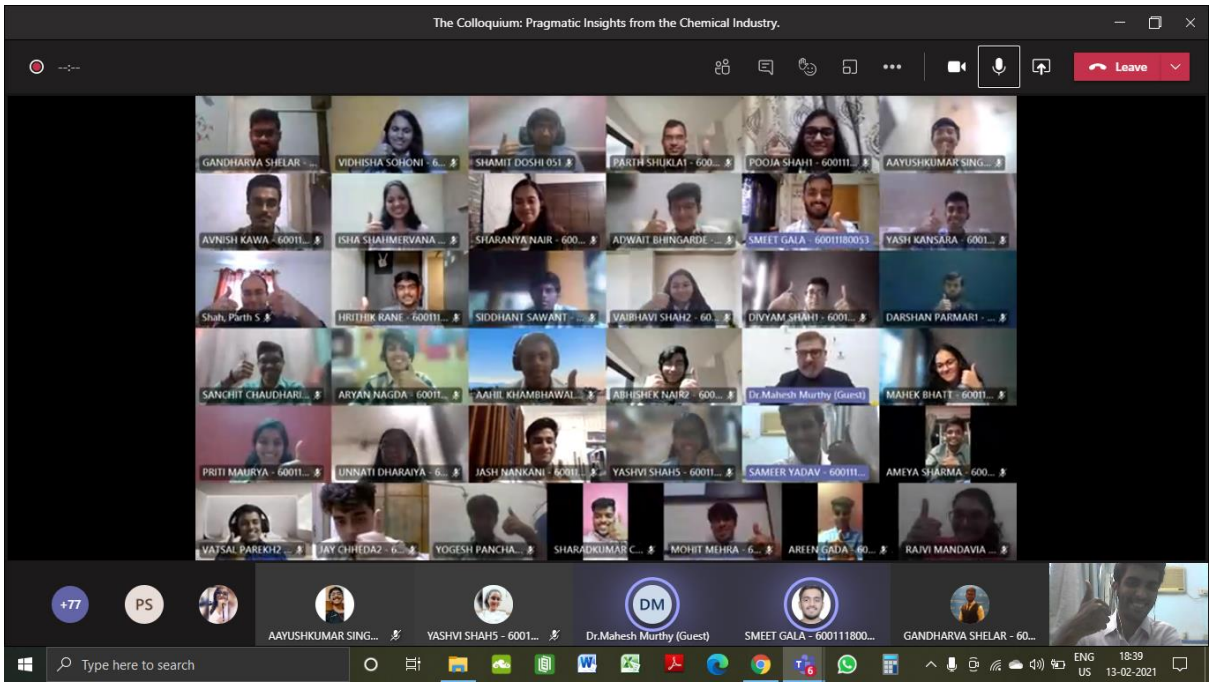

The Rustic Dimension of the 21st century

WASP: Workshop on ASPEN

February 2021,

Professor Thota Sivaji of Aaharya Technologies and his colleagues had collaborated with DJSCE IIChE in February 2021. The objective being: teaching chemical process simulation software fundamentals to students and professionals alike.

Aspen HYSYS, the most comprehensive chemical engineering software utility, was the preferred choice of approach. It is often spoken about but seldom taught in India, even though it has seen two decades' worth of updates and inclusions in many engineering models throughout the world.

Leaning heavily on minute modalities, the software could easily become a nightmare of buttons and options for newcomers. Hence, it was important for the workshop to not breach too deep while yet showing the capabilities and applications of computer software in modern chemical engineering. Professor Sivaji assured the team of fulfilling this request through his tailored course. He conducted the lessons and made the software available for use on personal laptops, via remote installations, which the DJSCE IIChE team found very impressive.

Two batches of approximately thirty students each were opened for enrolment after seeking necessary permissions from Prof. Rupali Karande (head of Chemical Dept.). The length of the workshop was fixed to thirty days, translating to one hour each day; perfectly within the liking of even the average engineering individual.

The first few sessions proved to be a helpful tutorial and made it possible for anyone to select their choice of chemicals, affix the degrees of freedom, methods of calculation, and securely make it to the simulation phase. That accessed the point where factory equipment such as coolers, heat-exchangers, distillation and absorption columns, conversion reactors were taught.

Weekends were reserved for doubts and to explain theoretical concepts such as heat exchangers so that even 2nd-year students didn’t feel groping for information. The final week introduced two compound-specific plant designs. The first being Dimethyl Ether (DME) followed by crude oil.

Every lecture had its corresponding recordings posted on YouTube and the company website: aspenhysys.com with lifetime access. This flexibility was greatly appreciated and added the feature of revising down the line. Finally, a set of three problem statements were assigned, which tested each students' understanding of the various topics taught during the program. This provided an incentive to receive a high grade along with the official certificate.

All the applicants expressed that they had retained a significant portion of the course material even a month after completion and stated that how the said course would add to their technical skillset. They were pleased to get a hands-on experience with Aspen HYSYS and keep the software to themselves. For several others, it served as a great entry to learn further about computational engineering and become more tightly integrated with it.

Treasures of the Tierra – An Online Treasure Hunt

March 21, 2021

DJSCE IIChE organised its first ever Online Treasure Hunt, dubbed Treasures of the Tierra, as part of their flagship annual event, AlChemE. It revolved around the fundamentals of Chemistry across two levels of increasing difficulty. Rounds one through four which were timed, made up level one and teams which answered all correctly, advanced to the final stage, consisting of the untimed rounds, five through seven.

Clues to each successive round were provided on unique WhatsApp groups, bearing a relatable title. This gave the Treasure Hunt the semblance of movement albeit in the virtual space.

The event kicked off at noon. The event sponsors were Youth Incorporated (Social Media Partner) and Chemical Weekly (Print Media Partner). Thirty teams, each comprising of 3 team-mates participated from a number of colleges. Post the introduction and explanation of the rules on MS Teams, the teams were segregated into their respective preliminary WhatsApp groups as per the set of clues allocated to them by the committee.

Proceedings were smooth since each team was under the guidance of a co-ordinator, assigned to them on the previous day itself. All preliminary doubts and pleasantries were exchanged beforehand, thereby resolving issues pertaining to individual teams.

Backup co-ordinators were also in place and internet disruptions were mitigated by utilizing WhatsApp as the distribution and communication medium. All members were constantly active on a parallel MS Teams meeting to help each other out with technical or spur of the moment troubles.

The Treasure Hunt was scheduled to end at 1345 and a number of teams successfully completed the seven set tasks within the stipulated time. A second MS Teams meet was

organised to declare the first three victors. The vote of thanks was delivered, expressing gratitude to the efforts of the team, event sponsors, flexibility of time and the support given by the Principal, HOD of the chemical department and its venerable faculty. A cordial invitation was also made for the participants to join the subsequent Chem-e-Talks event, also part of AlChemE 2021.

The Online Treasure Hunt was an exciting prospect and a definite success in its execution amidst the presence of the global pandemic and team DJSCE IIChE thanks all its participants once again for making it so.

Chem-e-Talks

March 21, 2021

DJSCE IIChE, under the banner of its flagship annual event "AlChemE", organised "Chem-e-Talks" that aimed at imparting impetus to one's ideas. With the online semester in full flow, team DJSCE IIChE identified the need of the student fraternity wanting to have an informative, engaging, and enthralling session with a revered individual and were quick to deliver them with "Chem-e-Talks" - a cardinal seminar that was hosted on the 21st of March, 2021.

Not only does a keynote lecture helps one develop his leadership skills but also hones one's thinking ability, ideation and other key attributes.

The committee was overwhelmed to receive the full-fledged support of the Principal, Dr. Hari Vasudevan, HOD – Prof. Rupali Karande and all the faculty members of the department.

The guest speaker for this seminar was honourable Dr. Sirshendu De, a professor in the Department of Chemistry at the prestigious IIT Kharagpur. He did his undergrad, post-grad and PhD from the Indian Institute of Technology at Kanpur and has done extensive research on membrane separation, transport processes and flow through micro-channels. Being at the very top in his field, Dr. De has been embellished with numerous prestigious awards viz. Shanti Swarup Bhatnagar Prize, Amar Dye Chem award and Herdilia Award. His experience and expertise in the industry discerned him as an ideal mentor for students as he enunciated upon "Indigenous Innovations for an Aatmanirbhar Bharat".

The webinar, which was conducted online on Microsoft Teams app commenced with Gandharva Shelar, Chairperson - DJSCE IIChE, giving a brief description of the student chapter followed by Prof.

Rupali Karande showering some words of wisdom. As Dr. De took over, he first shared a presentation and highlighted the case studies that he would be discussing in the seminar. The case studies included:

- Arsenic removal by laterite soil.
- Fluoride removal by mineral rich soil.
- Treatment of rice mill effluent.
- Cyanide removal from steel industry effluent.
- Low-cost spinning of haemodialysis membrane.

As he talked through all of his projects, Dr. De told the pupils about all the risks and hazards that were involved and how intricately his projects were related to the daily lives of the public. He emphasized on how each solution a scientist comes up with, should be socially acceptable and well received by the masses. He vividly explained the geological and physiological impacts of the presence of toxic chemicals and how the current situation helped him keep himself motivated. He later followed it guiding the students through the low-cost filter he had worked on and shared images of the locations where the filters were installed. The radiant smiles of all the people benefitting from his invention was truly a thing to adore. The way he explained the ideation, construction and working of his inventions was truly admirable. Dr. De exclaimed on how important the prototyping phase is to a project and how one should never shy away from hard work until the completion of his project. Following this was a segment where he narrated his experiences of working with organisations like the UNICEF and the State Governments.

The key takeaways from his lectures were:

- Innovations and improvisation of technology is required to reduce cost, accessibility, value-addedness and performance of existing technology.
- Success of technology lies in its outreach capacity and affordability of marginal common people in remote places.
- Willingness to do something.
- The perseverance and drive to take the research till the very end.
- Continuity of the research and the sustained effort.

The lecture was followed by a Q&A session and some amazing questions were answered beautifully by Dr. De. Having the floor open to discussion provided the pupils with the opportunity to interact with a true erudite and have their queries cleared.

The meeting was drawn to a close with a vote of thanks and the entire team was grateful to have such an active participation by the understudies and the faculty members till the very end of the session. The participants had optimistic feedback and expressed how they would like to attend such informative sessions in the future as well.

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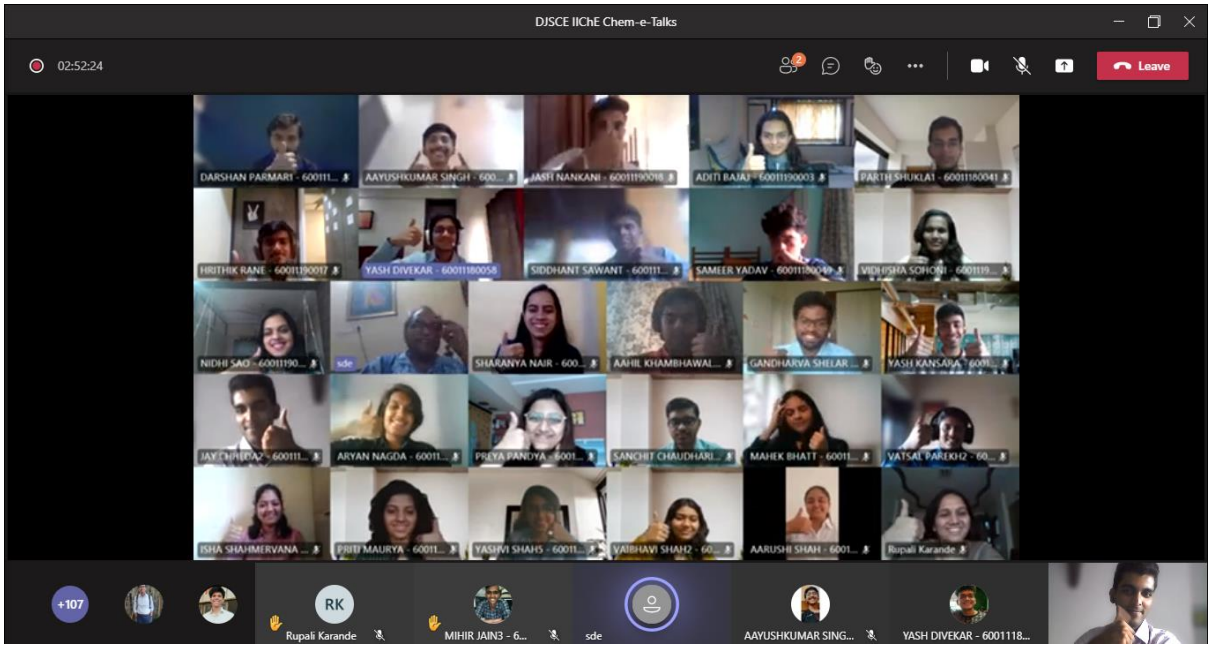

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Chem Tank

April 11, 2021

AIChemE 2021 brought another sparkling contest to the table and it wasn't strictly oriented to fervent chemical minds. Chem Tank, created by team DJSCE IIChE and powered by Neogen Chemicals Limited, was a rendition of the hit reality show 'Shark Tank.' Teams of two, three or four members chose or were allotted a company with a chemical background. It was their task to prepare a succinct pitch and presentation to draw a fresh investment from our panel of judges. With a maximum cap of 5000 crore and a slice of equity in return, the competition required the optimum split about the fulcrum.

The pleasantries and introductory notes commenced at 11 AM on Microsoft Teams and the first of the sixteen teams were escorted to their breakout room at a quarter to noon. Team co-ordinators were already in place to attend to any individual queries/lapses and ensure smooth communication of messages between the committee and the participants. Each party had plenty to offer and plenty to take away as well. This was the successful barter brought about by an event which tested a variety of areas such as general financial knowledge, logical ideas to justify the investment, concise and articulate delivery of the pitch, crisp presentation and a calm demeanour towards the judges questions.

The Council of Investors (title bestowed to our judges) for the day were segregated into two factions. Each side shall have four members who evaluated the entrants based on an array of factors and lent a formidable touch to the negotiations.

Panel A consisted of:
1. Soubir Bhatt - Founder & CEO, V & E Corp, an initiative to Venture in and Explore the International Business Space.
2. Naushad Khambawala - Global delivery head for oil and gas at Larsen & Toubro Infotech.
3. Aditya Kumar - Co-founder and Vice-president of The Summit Alliance.
4. Omkar Patil - Founder and CEO of Infigon Futures.

Panel B consisted of:
1. Jaydeep Mehta - has his own Financial Advisory firm and advises clients in various kinds of investments such as shares, mutual funds, AIF etc.
2. Tejas Gala - Head of Sales (India and Sub-continent) for Titanium technologies at Chemours (India) Pvt. Ltd., a spin off business of DuPont (India) Pvt. Ltd.
3. Parnika Singhal - presently working as a management consultant for Accenture strategy.
4. Deepak Gupta – worked as a software development engineer at Oracle and Adobe.

The checkered flag was waved a little after 5PM. A concluding meeting was organized. Prior to the declaration of winners, the jury had a couple of suggestions to share and encouraged the spirit of participating in such events. As Mr Jaydeep said and I paraphrase 'This is a great approach for the students to volunteer to be a part of the professional sphere while retaining the fun. It also provides a tangible development to the students' dream of launching their own start-ups in the future.'

The top three highest scoring teams took home cash prizes and the committee even reserved prizes for certain exceptional qualities like the presentation and pitch. The event was wrapped up with a vote of thanks for the guests and expression of gratitude for the support of the Chemical Engineering Dept. The committee lent a bow to what was a very creative and exciting day.

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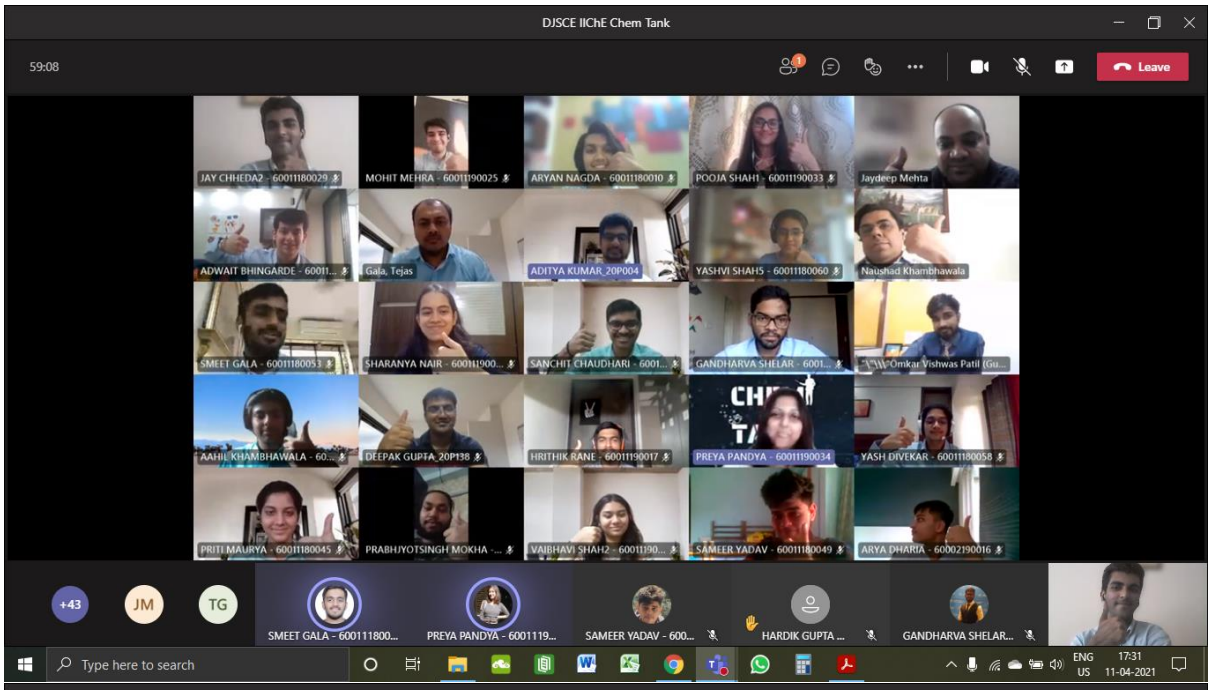


The GATE-Way

April 17, 2021

The GATE-Way – Your Perfect Getaway was the examination themed webinar for Saturday evening on the 17th of April. The DJSCE IIChE committee had invited Mr Pratik G Bhagat to lend a touch of chemical engineering specificity to the important GATE entrance tests.

He was a Senior Process Engineer at GSEC, has co-authored articles in The International Journal of Environmental Engineering and Management (IJEEM) and Chemical Engineering World (CEW) and is a founder of ATTEMPT to Succeed, an online GATE coaching initiative, targeting solely the subject of Chemical Engineering (CE).

Mr Bhagat dictated the premise for the GATE CE examination. It was 'identifying the roles and responsibilities of a chemical engineer in the chemical industry.'

By knowing the above, one could pinpoint the required areas of expertise and could then understand the assignment of the GATE syllabus. This is summarized in the table below:

Role & Responsibility	Area of Knowledge/**Subject**
Management Consultancies	Market research Finance Operations **Chemical Engineering Economics & Business Outlook**
Licenser Technologies	Improvement Technology Pilot Plant Setup Basic Engineering Package **Chemical Technology** **Chemical Reaction Engineering** **Heat & Mass Transfer**
EPC (Engineering Procurement & Construction) Consultancies Lump Sum Turnkey Consultancy oriented only	Technology Selection Scale-up of Pilot Plant Construction and Commissioning **Instrumentation** **Process Calculation** **Thermodynamics**
Process Equipment Manufacturing	Sizing Simulation Quality Control **Process Calculation** **Thermodynamics** **Heat & Mass Transfer**

He went on to say that GATE is a very technical paper and the preparation can even prove beneficial for questions of similar footing, asked during placements. Scores are valid up-to 3 years and a 20% qualification margin, which relates to an average general score of 35, was certainly achievable.

He assured us that as in the capacity of a soon-to be chemical engineer, a majority of the questions are framed to cater to the applicant's degree of proficiency, with the remainder being Mathematics and General Aptitude. The approximate division is as follows:

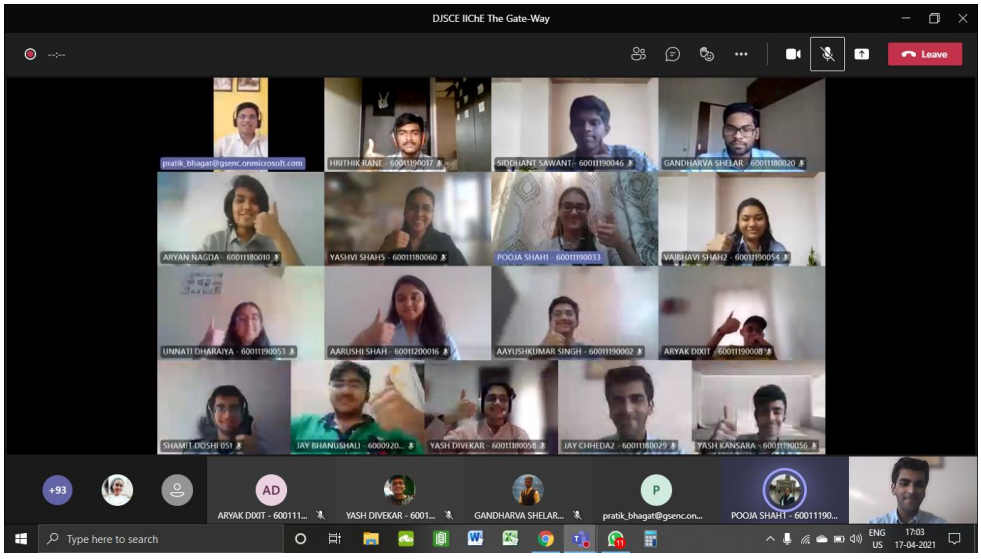
General Aptitude	15 questions
Mathematics	13 questions

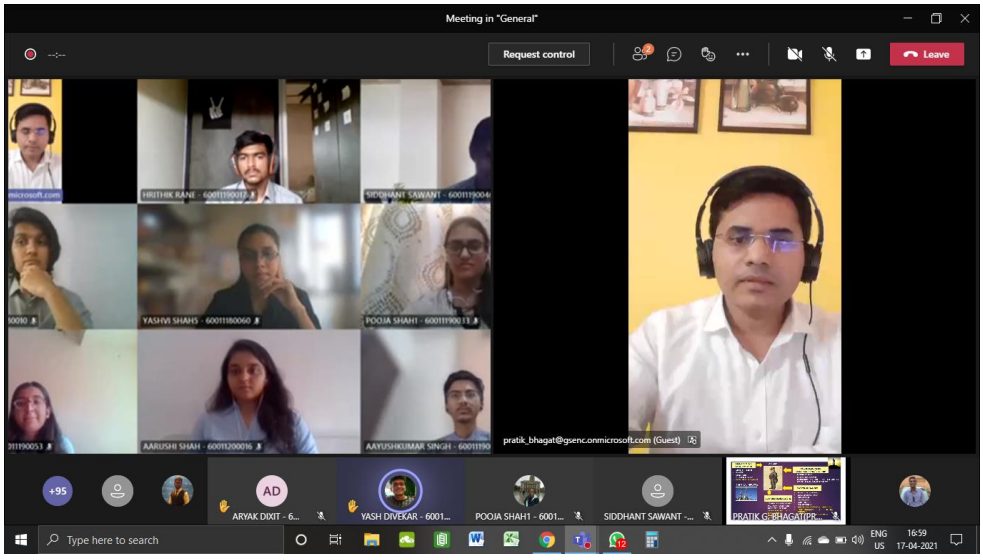
Chemical Engineering	72 questions (20 X 1 mark) (26 X 2 marks)

The Q&A session which ensued, allowed Mr Bhagat to prescribe individual advice such as justifying preparation as early as the 2nd year, the dilemma between choosing a Public Service Unit work contract or pursuing a Masters if one qualifies, reliance on single guide-books etc. As for addressing the difficulty of GATE he said,

"Everything you find easy, you once found hard, So dream big, begin small and start now."

The vote of thanks was given after an informational hour to the honourable guest speaker, the professors of DJSCE's chemical dept, especially Prof. Rupali Karande, encouraging list of participants and the DJSCE team members.





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Industrial Visit

July 17, 2021

INDUSTRIES VISITED:

- Huber Group India Pvt. Ltd. - Plot No. 808/E, Phase II, GIDC, Vapi, Gujarat 396195.
- Micas Organics Limited - Plot No.321/3, GIDC Rd, 40 Shed Area, Phase 3, GIDC, Vapi, Gujarat 396195.

TRANSPORTATION: Private Bus

STUDENTS: A total of 50 students of SEM V and SEM VII (B.Tech Chemical Engineering)

ORGANISING COMMITTEE: DJSCE IIChE

FIELD REPORT:

Industrial visit is considered as one of the most tactical methods of teaching. The main reason behind this is that it lets students know things practically through interaction, working methods, and employment practices. Moreover, it gives exposure from an academic point of view. It also provides students with a good opportunity to gain full awareness about industrial practices.

As said by Francis Bacon that "Travelling in the younger sort is part of education, while in the elder sort it is part of the experience", thus, corroborating the quote aforementioned, the members of DJSCE IIChE felt the need for organizing an educational visit for the students so that they could better understand the intricacies involved when applying the theoretical concepts learned.

Having made sure of maintaining all the safety norms and social distancing guidelines, the contingent of budding chemical engineers left for the much-awaited industrial visit. Following a 4-hour bus journey, the group finally arrived at the 1st industry - Huber Group India Pvt. Ltd. which is one of the world's leading international specialists for solutions and technologies relating to printing inks, printing aid, and raw materials.

The field visit began with a quick briefing by the Security Officer who told the students about the rules and regulations that were to be followed throughout the visit. Soon the group was split into two and each group was taken on a thorough tour of the plant by a guide.

The students were first apprised about the Effluent Treatment Plant which is responsible for the removal of high amounts of organic compounds, debris, dirt, grit, pollution, toxic, non-toxic materials, and polymers, etc. from industrial effluent. The guide emphasized how the establishment was a zero-discharge plant and that environmental preservation was one of the main priorities. The students were also shown the production units where different coloured inks (red, blue, and yellow) were produced and were given a walkthrough across the two blocks. The outer block was responsible for the wetting and dispersion of the pigments whereas the inner block was responsible for the stabilization, packaging, and quality control of the finished product. Huber group was largely an independent unit outsourcing only 10% of the raw materials. The important processes of the manufacturing of inks and resins were thoroughly explained to the understudies. The guides covered every small aspect of ink making by giving day-to-day examples. The students were briefed about everything ranging from the plant size, the number of employees, the instruments used, the packaging ideas employed to the distribution and sales. Following the visit to the production line, the students were then taken to the fire safety department of the industry where the guides highlighted the importance of having an active fire safety and health department throughout the year with the plant having 2 fire trucks and multiple on-call doctors as emergency responders to any mishap that may occur. Throughout the visit, the guides were patient and adept and answered all the queries thrown at them skillfully and politely. This marked the end of the educational visit to the first of the two industries as the students were escorted back to their bus.

Before the group went over to the second industry for the day, they took a brief stop for lunch which instilled a refreshing spirit among the participants as they geared up for yet another scholastic retreat.

The second industry the pupils visited was Micas Organics Limited which is one of India's fastest growing pigment manufacturers having provisions to make its pigment intermediates. Micas Organics excels in organic pigment manufacture and chemicals such as 3-3 dichloro benzidine and 4B acid.

Following a 30 min drive from the restaurant and after being welcomed by the Security Officer, the students were escorted to the main production unit. Micas Organics had a three-storey production unit with each floor having a different set of reactors, autoclaves, mixers, and storage tanks. The Plant Head elaborated on the different types of materials used (mild steel, glass-lined steel, rubber-lined steel, tile-lined steel, etc.) in different units to optimize the production of pigments. The entire factory floor was rubber-lined to prevent any corrosion from the reagents that were being used. As the Plant Head explained the various processes involved in the production, the students could be seen applying their classroom knowledge in understanding the manufacturing mechanism. As the pupils explored the three floors, the Plant Head and the engineers were proactive in explaining to them the smallest of knobs and gauges that would further help the students in comprehending the process flow diagrams of the various mechanisms. Seeing actual batch reactors, something that the pupils had only seen in books till now, brought about an air of enthusiasm amongst the participants. Following this, the students were taken on a tour of the effluent treatment system that the plant employed. The students were also shown the large septic tanks that were used for the re-entry of effluents into the

effluent treatment system making Micas Organics a zero-discharge plant. Finally, the chiefs lectured the students on the importance of safety in a chemical production unit and how the fire safety and healthcare departments worked all year round in unison with all the factory workers. This concluded the visit at Micas Organics Limited and the students were escorted back to their bus.

8 hours of tiresome travel wasn't enough to wipe off the smiles on the pupils' faces as it was evident that the industrial visit was an enriching experience. Acquiring knowledge that was beyond the confines of a traditional classroom was fruitful for the understudies as it would help them pave a path towards success and become the pillars of tomorrow.

The college authorities also deserve a special applause. Prof Rupali Karande (Head of Chemical Department) and Dr Hari Vasudevan (Principal, DJSCE) always stood like a rock in support of DJSCE IIChE which made the educational trip a sheer success.


UNIT 2
MICAS
MICAS ORGANICS LIMITED

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Flames of Hope: Ek pehel pradushan se mukti ki aur!

1st June, 2021.

"The best way to find yourself is to lose yourself in the service of others."

DJSCE IIChE, along with being a technical committee, believes in bringing about a positive change in the world, one step at a time. Having this same belief, this year the team took on a socio-technical project – "Flames of Hope" with a single objective of bringing smiles to the faces of the underprivileged. It was a project which involved the fabrication of 45 smokeless chulhas, completely in-house, to be donated in Khutal Baragaon – a small village in Maharashtra around 120kms from Mumbai. The stoves would work to provide an economical and healthy alternative to the rural methods of cooking.

For the project, DJSCE IIChE received unwavering support from the Head of Chemical Department- Prof. Rupali Karande, Principal- Dr. Hari Vasudevan and the workshop staff. The necessary permissions to work in college during the pandemic's 2nd wave were made only available due to the support from college authorities, without which Flames of Hope could never be executed.

After two months of planning and hard work, the day of donation finally arrived. The chulhas and books were already in college, groceries, snacks and the water supply were accounted for and the clothes had been collected by various members. Everyone had also arrived punctually at the predetermined pickup points. The only stop made en-route was for breakfast. By noon, the team had unpacked at the government school hostel, graciously made available for their stay.

The tempo was unloaded and the materials for the tumbler composting device were set up in the nearby 'Aanganwadi'. The villagers had begun gathering while the bamboo posts were slotted into the dirt and the rotating drum was mounted on them. Hot scrumptious poha was served to them while they waited in anticipation. Meanwhile, some members had taken a round in the vicinity, collecting dried leaves and biodegradable household refuse. The contents were emptied into the drum and the process of layering it with soil was shown to the villagers in real-time. An articulate explanation of the process and the parts was also simultaneously given by two of our teammates. The prototype was donated to them after the

demonstration and the members even approached them individually to answer their queries, assure them of the ease of use and diffuse the shyness.

The team commenced with the clothes donation drive then and there. Since the number of men's clothing was far outweighing the rest, a set of one shirt and a pair of trousers was donated to each male adult present for the composting demonstration. Women's and children's clothing were laid out and it was endearing to see them mutually selecting garments that would suit each other's age and style. One large bag of clothes was kept aside to be donated later, along with the chulhas.

Once finishing with the work at "Aanganwadi", the team split into respective groups of three or four. Each group had to deliver three chulhas; one for every household that the group visited. The glimpse of the living conditions was remarkable. Houses were made of cow-dung, spaced closely apart, and had less than what anyone would consider the bare necessities of survival. Intensive rice cultivation was practiced by several. Their present cooking medium involved burning firewood on a raised platform. The villagers were provided with a simple explanation of the chulha; things such as how to slot in the firewood, handling it while cooking, the importance of the bores, and the collection plate. A final check regarding its weight-bearing capacity was also given by placing a heavy vessel atop it. After clicking photos, everyone re-grouped at the school campus.

On the special request of the school headmaster, a pre-decided group headed back to the school at 1:30 pm to begin the educational and career guidance seminar for tenth and twelfth-grade students. The 10th-grade students were told about the various subjects they could choose from and were explained how each choice would help them in their future. The committee members used examples of famous personnel and local professionals to make the seminar interactive. They elaborated on the importance of choosing the field of their choice and not getting influenced by what the others were opting for. The session was well received by the pupils as they greeted the team members with a round of applause at the end of the seminar. Following this, the team members further split into 3 different groups and visited the 12th-grade classes belonging to the respective fields (viz. Arts, Science, Commerce). Having already chosen their fields of choice, the 12th-grade students were told about the various career choices that they could choose from. The team members elaborated on how the internet could be used effectively to broaden their knowledge. The students were also given links to the official aptitude test conducted by the government which would further guide them and help them get some clarity. Photos and videos for the creation of records and publicity purposes were made simultaneously by the team members. Distribution of food, chocolates, and biscuits was also done during the entire day and the members also landed up playing cricket with the children there.

Lunch was served in the cafeteria. As advised, everyone had brought their own steel-ware, instead of plastic/paper crockery, to minimize waste generation. The remainder of the day was available for recreational activities such as playing, sightseeing, resting, etc. They also made a trip to one or two households in the evening to see the working of the chulha. Seeing the chulhas in action, inundated each team member's heart with newfound joy, and all the exhaustion that there would've been was quickly wiped off. There were no compromises made with regards to the food, with hot snacks served at 7 PM followed by dinner at 9 PM.

After an early breakfast the next day, the photoshoot with the official DJSCE IIChE banner and heads of the school was conducted. The team then proceeded on a sightseeing tour, which included the Ashtavinayak Lenyadri Ganpati temple. A halt was made late in the afternoon for lunch as the team returned to Mumbai in the evening. Two days of exhaustion was still not enough to wipe the smile off of the student's faces as they went home with the joy and satisfaction that they'd given something back to society.

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WEEKEND VIBE

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स्वच्छतेचे संदेश

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