



NATIONAL INSTITUTE OF TECHNOLOGY RAIPUR

31



Shilpi

2016





Food and Agriculture
Organization of the
United Nations



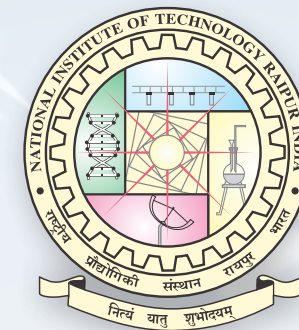
The 68th UN General Assembly declared 2016 the International Year of Pulses (IYP).

The Food and Agriculture Organization of the United Nations (FAO) has been nominated to facilitate the implementation of the Year in collaboration with Governments, relevant organizations, non-governmental organizations and all other relevant stakeholders.

The IYP 2016 aims to heighten public awareness of the nutritional benefits of pulses as part of sustainable food production aimed towards food security and nutrition. The Year will create a unique opportunity to encourage connections throughout the food chain that would better utilize pulse-based proteins, further global production of pulses, better utilize crop rotations and address the challenges in the trade of pulses.

The specific objectives of the IYP 2016 are to:

- Raise awareness about the important role of pulses in sustainable food production and healthy diets and their contribution to food security and nutrition;
- Promote the value and utilization of pulses throughout the food system, their benefits for soil fertility and climate change and for combating malnutrition;
- Encourage connections throughout the food chain to further global production of pulses, foster enhanced research, better utilize crop rotations and address the challenges in the trade of pulses.

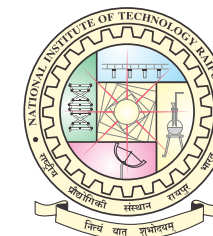


*Life is like a butterfly – You go through changes
before you become something beautiful*

NATIONAL INSTITUTE OF TECHNOLOGY, RAIPUR

Dedication

This issue of SHILPI is dedicated to the children of Syria, to all those who couldn't be and all those who had to outgrow the womb faster...May the Almighty grant them strength to overpower the scars...



Message from Director



राष्ट्रीय प्रौद्योगिकी संस्थान रायपुर

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(Institute of National Importance)

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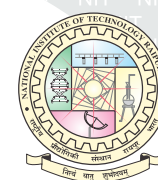
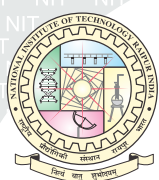
Magazines are indispensable part of an institute which provides an aesthetic platform to the students as well as teaches to showcase their talents in their creative fronts. As mirror reflects the appearance of a person, the institute magazine reflects the talents of the students and teachers it houses.

In this context, 'SHILPI' - The annual magazine of NIT Raipur plays the role of an ideal institute magazine. The institute is constantly striving in all round development of the students through its endless efforts, and 'SHILPI' is one such endeavor, providing wide spectrum of literary and artistic talents of the students that culminate into the ambrosia of life and philosophy.

I am completely contented with the members' hard work and commitment and the only suggestion is to implement their innovative ideas to ameliorate the magazine every year.

In future, I wish to see the institute at the pinnacle of excellence accommodating the brilliant young engineers that would make recruitment strenuous for the companies to select students from a bunch of talented freshers. I wish the Literary Committee of the Institute, Faculty and students of the institute all success in their endeavors. My ultimate message to all the students is to work hardtop achieve your goals and always be creative and innovative.

(Sudarshan Tiwari)
Director



Editorial



Hello Readers,

Every day we go through new events, knowledge, information or ideas many of which affect us in some ways and stay with us for a long time. We are people of this world and anything that happens around us raises a range of emotions. Be it every day happenings around us or something from a far off place and time, we are all influenced in some way. Some hit like bullets and stay in the mind for a long time, some others, mellower, are forgotten.

The world is not the same anymore. Every day it seems more of it is being broken down. World leaders hold conferences on environmental degradation and sustainability. Many fail to notice here that environment is not the only sacrifice of this atrocity by humans. There needs to be equal focus on human morality degradation and sustainability too. The cool stream of reason and logic and a compassionate and empathetic attitude is the real requirement of the time.

In this college, with the world, we grow, stronger, wiser and more understanding. We find out reasons and try to infer solutions of present problems. Along with being engineers, we become creative geniuses, authors, artists and express the feelings from the deepest corners of our minds.

Team LITERATI strive to hold on to all these expressions from all the students and staff of NIT Raipur and present it within the two covers of SHILPI. Also we proudly present the triumphs with blood, sweat, tears and toil, and the celebrations, with effort and dedication. We welcome you to the confluence of companionship, hard work, wins, random expressions and all we could find in this campus.

So sit back, relax and enjoy.

Faculty Support



Mithilesh Atulkar
Chairperson



Dr. Manoj Kumar Chopkar
Member



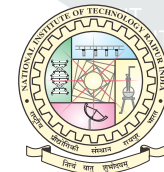
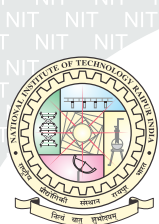
Jaya Dwivedi
Member



Pankaj Dewangan
Member



Saiket Majumdar
Member



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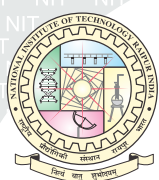
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The 6th Convocation

Graduation is a special time of the year when students trade in their books for robes and caps and prepare themselves for a world beyond the walls of a college. The day is awaited by graduates with bated breath, the day they can walk out the gates of this college with a degree in hand and smiles on their faces. The convocation day is indeed a euphoric day as graduates come back to college to collect the parchment that sets them free to aim for and achieve a new zenith.

It is a day which officially marks the end of your academic life and the beginning of your professional life. A day where every face, be it the face of a student or a parent or a teacher, beams with happiness and delight. Proud parents cheer for their children with tears of joy in their eyes and the faculty feels delighted on having catered to the academic and intellectual needs of another set of students, thus preparing them for a life ahead.

The sixth convocation conducted by National Institute of Technology, Raipur was marked to confer the pass outs of the academic year 2014-2015 of Graduate degree/ Post Graduate degree programs with a degree and PhD scholars with their doctorate and to celebrate their moment of joy with their family and friends.

The Chief Guest for the sixth convocation of NIT Raipur was Mr. Sudhir Vasudev, former Chairman and Managing Director, ONGC and Chairman, Board of Governors, NIT Raipur accompanied by Dr. Sudarshan Tiwari, Director, National Institute of Technology, Raipur.

Tuesday, 05/01/2016

Venue: National Institute of Technology, GE Road, Raipur, Chhattisgarh.

Mr. Sudhir Vasudev, an alumnus of NIT Raipur and an extremely successful former Chairman and Managing Director of ONGC was the chief guest on 5th January, 2016. "Graduation is only a concept. In real life, every day you graduate. Graduation is a process that goes on until the last day of your life. If you can grasp that, you'll make a difference." Highlighting this idea, the Chairman of Board of Governors, NIT graced the occasion and made a point to the students that education is more than just a preparation for a job – it is a foundation for lifelong learning, enrichment and curiosity and they should strive for higher goals in life.

In his welcome address, Director of NIT Raipur, Dr. Sudarshan Tiwari highlighted the new infrastructure facilities available in the institute and talked about the upcoming new plans for the institution. A total of 993 degrees were





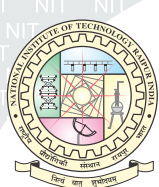
conferred including B.Tech, M.Tech, MCA and PhD students. B.Tech degrees were conferred to 823 students, M.Tech to 73, MCA to 84 and PhD to 13. A total of 38 gold and silver medals were awarded to students with excellent academic performance.

The sixth convocation ceremony which took place in NIT Raipur campus covered the institution in a blanket of joy and nostalgia. This day will be a lasting memory of life. This was the day when the graduates were the subject of pride in the eyes of their parents, their tutors and peers, having successfully completed their formal education and stepping into the real world.




Vox Populi

Be the best version of you



Ankit Agrawal

Information Technology

CAT
99.71



1. When and how did you choose CAT as your serious career option ?

Being from a business oriented family, I always had an inclination towards management and I was pretty clear about going for an MBA after my engineering right from the beginning and started my preparations from second year itself.

2. How much time did you devote towards CAT preparation ?

Initially, my preparation was limited to building up the basics and few problem sheets a week and I focussed mainly on improving my reading skills(newspapers, magazines, novels).During the last four months prior to CAT, I used to devote around 20 hours a week.

3. What are some common mistakes made by the students during preparation phase ?

People think that CAT is a test of language. No, it's not. It tests your reading and comprehension skills. You need not be a master of vocab and grammar(it sure helps,

though!). All you need to do is develop the habit of reading(between the lines!).Also, even though engineers are generally good with quants, one should still work on it instead of getting complacent.

4.What was the role of coaching institutes in your preparations ?

Although, I think CAT is something that can be prepared by self-study, coaching institute helped me get a structured idea of the test and prepared me in a more organized way.

5.Which all books and online material did you refer to ?

I referred TIME booklets and classroom sheets. Apart from this, I enrolled in two national level mock tests(AIMCATs by TIME and SIMCAT by IMS). Apart from this, I used to solve questions that I would come across at PagalGuy and other online forums.

6.What kind of profile should I groom during college, if I am serious CAT aspirant ?

Try to maintain a good

CGPA(8+) and if possible get some organisational experiences by being in clubs/committees/NGOs etc.

7. CAT is one of the most competitive exams in the country, how did you maintain perfect exam temperament?

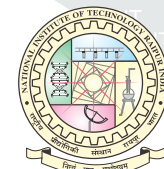
I gave a lot of mock tests in the run up to the CAT and I used to treat each mock as the real exam. So CAT was just another mock test for me(30th actually!).

8. Any advice to CAT aspirant ?

Find out your weak areas and start working on it. Try to increase your speed be it in calculations, problem solving or reading and finally enjoy this process of preparation.

9. Anything you want to share that might be helpful to the readers ?

Never lose hope. Work on your weakness and trust your strengths and keep in mind that there is no shortcut to success.



Selwyn Sagar

Chemical Engineering

GRE Score
324
TOEFL Score
106



1) GRE is a three-section exam, Verbal (English), Quant (Maths), AWM (Essay). Quant is pretty basic and easy to prepare. It can be compared to our tenth grade mathematics. Time management and speed matters quite a lot in solving quant. I prepared for Quant from the Manhattan 5lb book. Verbal requires regular practice and is tough to deal with. Start preparing for Verbal with learning High frequency words (Barron's 333 pdf). After comfortable grasp on the words you can then move on to the actual solving and practicing of the Verbal sections. I referred Princeton 1014 for practicing Verbal sections of the GRE. AWM (Essay) preparation involves practicing writing essays on the pool of topics provided by the ETS. I had joined a course for GRE and I

think it is necessary for Verbal and AWM but not for Quant.

2) Verbal is the section where most of the Indians face a serious problem. Quant being easy, many people still manage to lose points by committing silly mistakes. I faced a few problems in Verbal. The only way to score well in Verbal is practice!

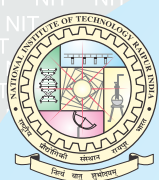
3) My course books, along with it Manhattan 5lb for Quant, Princeton 1014 for Verbal and ETS Official Guide for both Quant and Verbal.

4) If your Verbal is weak then I would suggest join a Coaching institute. I do not think coaching is needed for Quant. It is fairly very easy and straight forward.

5) There are no tricks for choosing colleges and writing SOPs. Choosing colleges should be your individual decision. This decision is based on many

integral factors like, for instance climate, rank of the university, tuition and living expenses, specializations provided by the university, notable alumni network, research done by the university in your field of interest etc. Choosing and making a list of colleges requires detailed research which can be done by asking seniors who are studying in that university, reviews of your program in that university, university website etc.

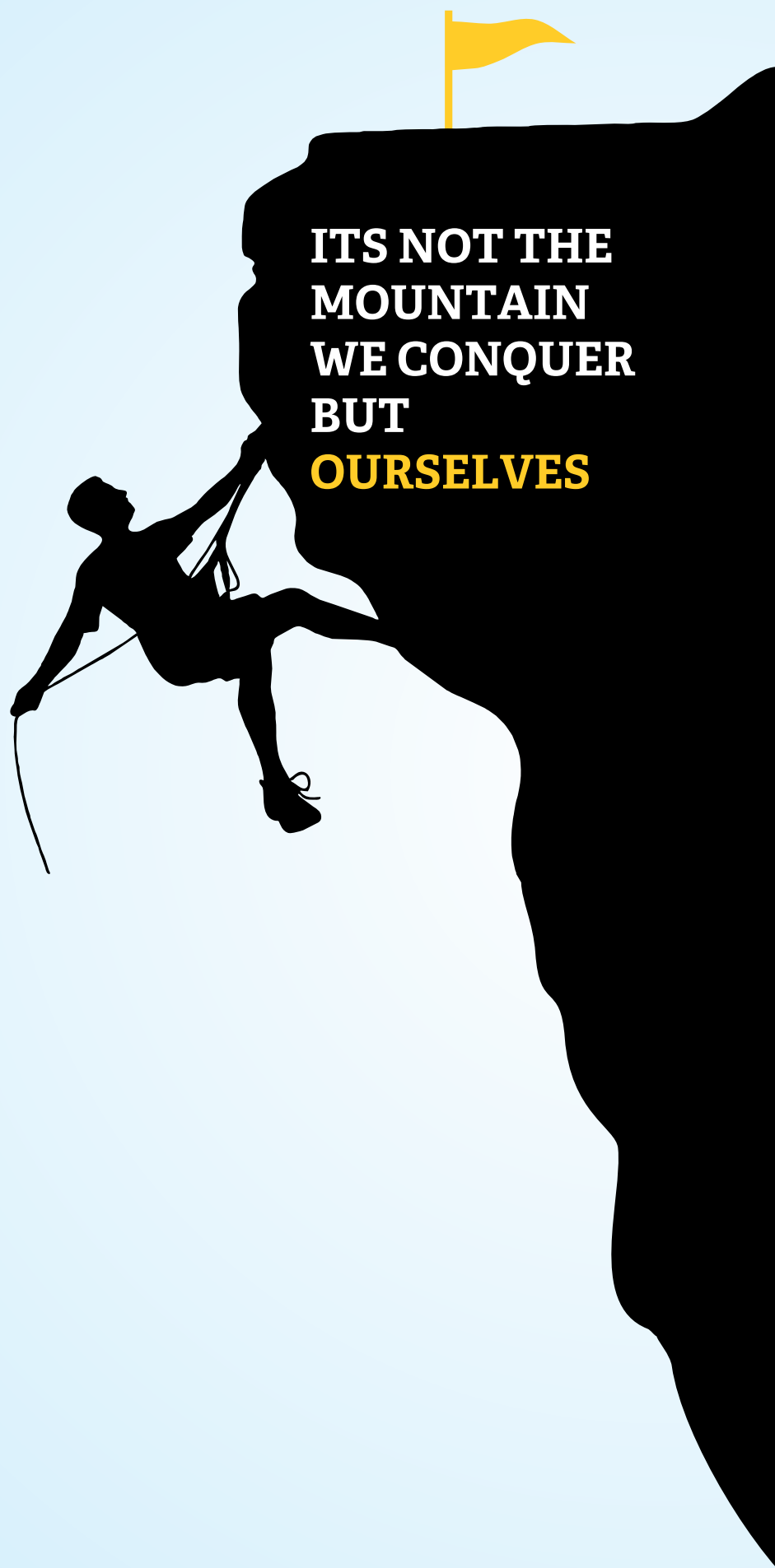
Before writing a SOP you should understand what a SOP is. SOP is basically you selling yourself to the university. It can be also considered as your autobiography! So, think of it as you are writing a book essentially an autobiography. Before writing a book, you need to sit down and draft the basic storyline of the book. This follows for SOP too. Write down everything important



about yourself from the moment you were born like, for instance what made you chose the field you are in now? What have you achieved as of yet? What projects have you done? What extra-curricular activities were you a part of? Your hobbies, interests (technical as well as non-technical) etc. SOP has a standard format and you should ask a senior for his/her SOP, and then draft your SOP according to that format. One important point regarding SOP is that you should be honest and avoid plagiarism.

LORs can be self-written and submitted to the professor or they can be written by the professor. If you are writing it yourself be honest about everything you mention.

6) I applied to University of Southern California, Arizona State University, Penn State, University of Pennsylvania, Ohio State University, UCLA and University of Florida. It is helpful to classify the universities you're applying in into Ambitious, Moderate and Safe. As a rule of thumb, you usually should apply to 3 moderate and 2 safe universities. Number of Ambitious universities is your choice.



**IT'S NOT THE
MOUNTAIN
WE CONQUER
BUT
OURSELVES**



1. When and how did you choose CAT as your serious career option?

One of the important domains of Mechanical Engineering is Management. With the introduction of management subjects in 5th semester, I started developing interest for managerial work. Initially, I used to practice aptitude just out of interest. But with increasing interest, I decided to pursue management as a career and work in a broader domain.

2. How much time did you devote towards CAT preparation?

My CAT preparation was about a year long. It consisted mainly of the classroom program and test series. The class room program was about 8 months long and test series continued for 4-5 months.

3. What are some common mistakes made by the students during preparation

phase?

Most of the students don't go for mock tests. It is a general perception that once the study material is finished, then one should opt for mock tests and because of this the actual practice time is lost. So it is really important to attempt a handful mocks in last few months. Also analyzing the tests in detail is really important. It helps one to know and work on their strong and weak areas. Without the analysis, mock tests won't add any value to the preparation.

4. What was the role of coaching institutes in your preparations?

Coaching institute played an important role in my preparation. First of all, the regular classroom program helped me to work consistently. The structured course material helped me to get along the things in an organized way and not lose my ends. The counseling from teachers motivated me and kept a check on my preparation.

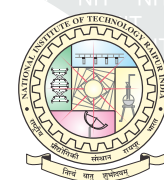
Rajat Vardiyani
Mechanical Engineering

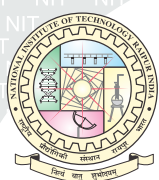
5. Which all books and online material did you refer to?

For the basics and concept building I referred to the study material provided by my coaching institute. A complete study material of any good coaching institute is enough for building the concepts. For the practice part I relied on online mock tests of various coaching institutes.

6. What kind profile should I groom during college, if I am serious CAT aspirant?

Management or rather any field, demands a commitment. One really needs to show the commitment and interest for what she/he is doing. The first thing would be to have decent grades in your college exams. They do matter. Apart from that one should also show passion towards her/his hobbies and interests. One should be able to utilize time in activities interested in. A diverse portfolio helps in getting edge over the other candidates.





7. CAT is one of the most competitive exams in the country, how did you maintain perfect exam temperament?

Any competitive exam requires a pumped-up but relaxed mind. One needs to be energetic all the time but also needs to be calm and not to panic. Confidence is one of the key factors in maintaining the exam temperament. Just before the exam, I had a talk with my mentor, Abhishek Gupta sir, and that was really motivating. It helped me to boost my confidence up.

During last 2-3 days don't push yourself very hard.

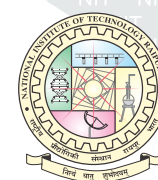
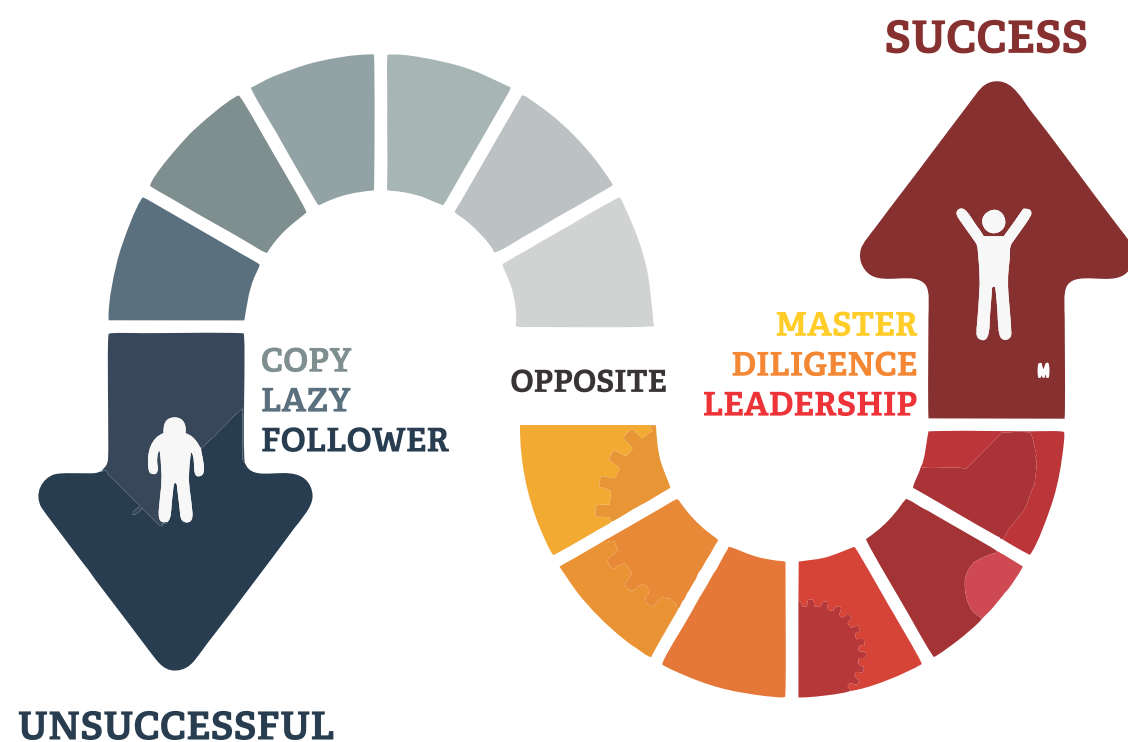
8. Any advice to CAT aspirant?

For exams like CAT I believe that practice is the most important part. For most of the engineers, maths is not a problem but language becomes one. Good reading is essential for improving the speed and comprehension. One can read daily articles and newspaper, which fulfills the reading requirement and also the GK part. For the logical reasoning section, solving puzzles would be

helpful. Book for puzzles by George Summers is a good one to follow.

9. Anything you want to share that might be helpful to the readers?

There will be many stages at which you might not do well or even feel to drop out. But I would say not to lose the confidence. Just have faith in yourself and work things out. Also take some time to live out the life and have fun.



RANK
9

Rohit Agarwal
Electrical Engineering



1. When did you decide that you want to attempt GATE exam as a serious career option?

Like everyone else, I was also concerned about getting placement in a good company right from the beginning, so when I came to know about GATE exam and the opportunities after clearing it, I decided to prepare for GATE.

2. How did you choose GATE over other options such as CAT, private sector jobs etc.?

I have keen interest in technical field and engineering. So choosing GATE exam over other competitive exams was not at all difficult for me.

3. Are you aiming at higher education or jobs in public sector?

If I get the job of my desired profile, then I will go for job, otherwise higher studies.

4. When did you start your preparations?

I started studying from 5th sem. But after 6th sem I was fully dedicated for it.

5. What was your strategy and how did you stick to it?

My strategy was to complete one subject at a time and then regular revision of studied subjects. Revision and practice are the two key factors. I practiced a lot of problems of GATE pattern. And I also practiced online tests in the last few weeks.

6. How did you maintain balance between GATE preparation and semester studies?

I mainly focused on GATE preparation and studied for semester during exams.

7. What was the role of various coaching institutes in your success?

I joined GATE ACADEMY in 5th semester. It helped me to focus my studies accurately according to GATE syllabus

and in clearing all the concepts.

8. Did you anticipate your result, when you were preparing for the exam?

I did not anticipate. But I had a target.

9. What are your suggestions to the aspirants?

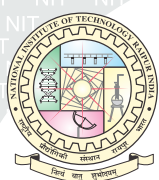
Don't leave any topic. Follow good quality books and study material. Be innovative while solving the problems. And be motivated throughout the preparation phase.

10. What all material did you use for the references, during the preparation phase?

I used study material provided by coaching and some standard books suggested by the teachers.

11. To which PSU's / institutes have you applied?

All the PSU's having vacancies for EE. And IIT Bombay and IISc Bangalore for M.Tech.



Mohit Shukla

Chemical Engineering

AIR
357



QUESTION 1: When did you decide that you want to attempt GATE exam as a serious career option?

ANSWER 1: When I am stuck around by n - number of options, I usually start eliminating those that are not very much important in achieving my short term goals. It was during the initial stages of my final year, when I started eliminating options like business administration, software industries etc. Moreover, it was my family support that always urged me not to leave my technical field so early.

QUESTION 2: How did you choose GATE over other options such as CAT, private sector jobs, etc.?

ANSWER 2: Every career option is as good as the one that you sincerely like. Honestly speaking, it was my deep liking towards a few subjects of chemical engineering that added weight in selecting a

technical examination GATE over other options like CAT. I was never in any hurry to take a job just for the sake of embracing myself. Even my family never forced me to get one immediately. From the very beginning, I was clear in my intent that it's a little bit difficult to leave my core chemical at least for me, though I was never good at it. So, I selected GATE as my career option.

QUESTION 3: Are you aiming at higher education or jobs in public sector?

ANSWER 3: To get selected in a public sector is always a wonderful thing. Yes, I am looking for a job in a Public Sector but besides this I can't deny the fact that higher education is something that has always been in my mind. So, I have taken my master's program here at IIT Bombay and it's good.

QUESTION 4: When did you start your preparations?

ANSWER 4: Just to let my parents know that I am doing something in my bedroom, I can say that I started preparing for GATE from the month of August. Being a lazy fellow, I find myself most comfortable during preparation especially when there is an ample amount of time. But the class tests, the labs, the project work deviated me at times from my focussed preparation. I gained a significant momentum when the 7th semester exams were over, that is, in November.

QUESTION 5: What was your strategy and how did you stick to it?

ANSWER 5: I can say it very clearly that I didn't like all the subjects. Or may be I never understood them in that much detail. But, some of the core subjects like Heat Transfer, Mass transfer, Fluid mechanics and

Chemical reaction Engineering always excited me. It was not merely solving questions, but the concepts were quite interesting and scientific. It was my deep liking towards these subjects that forced me to learn them more and more to get a clear understanding of the subject.

QUESTION 6: How did you maintain balance between GATE preparation and semester studies?

ANSWER 6: Well I can say that I have been successful in dealing with both things simultaneously. Don't take GATE as an examination. The moment you look at it from an examination perspective, things start becoming more complex and you will find it difficult to match between the two. Just take it as an opportunity to master some particular subjects that you like. GATE is just the extension of semester syllabus in a detailed manner. Learning things with a deep interest never hampers your result.

QUESTION 7: What was the role of various coaching institutes in your success ?

ANSWER 7: I never joined any coaching institute and any All India Test Series. I believed in my own hard work and dedication.

QUESTION 8: Did you anticipate your result, when you were preparing for the exam ?

ANSWER 8: No, I never did that and I urge all my fellow mates also to please never anticipate that. It won't add up. Believe me, it's not an examination where your strategies will work according to your plan.

QUESTION :9 What are your suggestions to the aspirants?

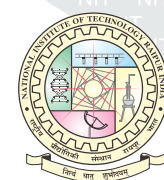
ANSWER 9: Believe in yourself and never give up is the Mantra which has been my favourite booster since last few years. Spoon feeding will not result in success. Be firm in your preparation and taking decisions. Meanwhile during the preparation, if you have to take some bold decisions. Then please take it. Be strong enough to believe in yourself. No external person can fetch you the success that you want

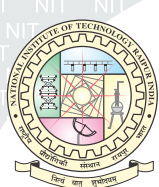
QUESTION :10 What all material did you use for the references, during the preparation phase ?

ANSWER 10: The same textbooks that we see in the Name of Textbook lists in the syllabus. The only difference lies in the way you learn things. But try to focus more on some foreign authors like McCabe and Smith for Mass Transfer, J.M.Smith for Thermodynamics and reaction Engineering. It would be really helpful to go through each and every lecture of NPTEL very slowly and steadily. If not for all subjects then atleast they are helpful for core subjects

QUESTION :11 To which PSU's / institutes have you applied ?

ANSWER 11: PSUs - Indian Oil Corporation Limited, Oil and Natural Gas Corporation, Hindustan Petroleum Corporation limited, Bharat Petroleum Corporation Limited, DRDO
Institutes - IISc Bangalore, IIT Bombay, IIT Delhi, IIT Kharagpur, IIT Kanpur, IIT Madras, IIT Guwahati.





D Vivek Metallurgy

AIR
76



1. When did you decide that you want to attempt GATE exam as a serious career option?

I went to IIT Madras during the summer break of third year. That is where I got the exposure and a first-hand experience of what research is all about. I decided to prepare for GATE and join IIT for M. Tech

2. How did you choose GATE over other options such as CAT, private sector jobs etc.?

I always believe being a student of science PhD is probably the ideal career path. I was curious to know more about my subject and GATE was the only choice to get into institutions of higher learning. GRE is another good option if you prepare well in time.

Other options of CAT or a Job never crossed my mind.

3. Are you aiming at higher education or jobs in public sector?

Unless any family pressures, I would highly recommend everyone to go for higher education against job offers. Once we get into job it's tough to get back to studies.

4. When did you start your preparations?

After my summer internship I appeared for direct PhD interview in IIT Madras. I had to prepare for it which fortunately had the syllabus as that of GATE so my preparations started by early August.

5. What was your strategy and how did you stick to it?

I focused more on previous year question papers. It helped me recognise the parts in which I needed more effort and organise my time accordingly.

6. How did you maintain balance between GATE preparation and semester studies?

There was no need of balance as they both

complimented each other. Major part of final year comprised of project work which did not disturb by preparations much.

7. What was the role of various coaching institutes in your success?

For the stream of Metallurgy neither was there any coaching available for was it required.

8. Did you anticipate your result, when you were preparing for the exam?

I did not expect the rank to be in top 100. I was reasonably confident of doing well.

9. What are your suggestions to the aspirants?

I would recommend solving all the previous year question papers. In case of Metallurgy follow the college curriculum properly as NIT Raipur syllabus

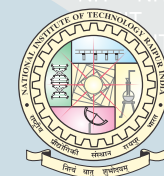
almost covers everything included in the GATE syllabus. Only mathematics and aptitude part is something that people have to prepare separately.

10. What all material did you use for the references, during the preparation phase?

I followed the course books and the reference materials as mentioned in the syllabus.

11. To which PSU's / institutes have you applied?

I applied for IISc Bangalore, IIT Mumbai and IIT Madras.



CAT TOPPERS



Rajat Vardiyani
Mechanical - CAT 99.95

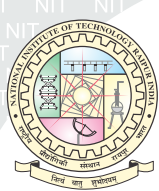


Ankit Agrawal
IT - CAT 99.71

GRE TOPPER



Selvyn Sagar
Chemical - GRE 324, TOEFL 106



GATE TOPPERS



Anshul Jain
Mechanical - AIR 336



D Vivek
Meta - IITM - AIR 76



Mohit Shukla
Chemical - IITB - AIR 357



Natasha Prasad
Meta - AIR 110



Natrajan Kumar
Chemical - IOCL - AIR 448



Pankaj Kumawat
Mechanical - AIR 497



Rajeev Dubey
Mechanical - AIR 181



Rohit Agrawal
Electrical - AIR 9



Shivam Singh
Electrical - AIR 698



Shubham Agrawal
Mechanical - AIR 35



Sumit Kumar Batham
Chemical - ONGC - AIR 520



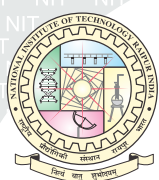
Udit Bhardwaj
Electrical - AIR 995



Vipul Gajpalla
Mechanical - AIR 247

English section





BEGIN TO BE NOW WHAT YOU WILL BE HEREAFTER

Change is constant. Nothing can change a change. As nobody is perfect, but everybody wants to be perfect, therefore, change is life and its cessation is death. If you want to change, why not today? Why wait for some other day to come? Today is the best day, and this time is the best time. You should immediately begin striving to be the person you see yourself becoming in the future. You should not just wait around for it to magically happen; it requires your active and purposeful will and action.

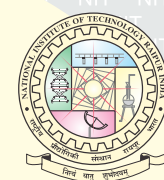
Life is a bumpy ride on the wheels of change. A journey, often difficult and sometimes incredibly cruel, but you are

well equipped for it. Tap into your talents and gifts and allow them to blossom. Incorporate the habit of changing according to the environment and igniting the change at that very moment.

Life is what we make it, make yours legendary. Do which is to be done at the earliest and you would be the successful, happy person that you always wanted to be. He can who thinks he can. Believe in yourself, YOU CAN. Dreams do come true, if you have the courage to pursue them. Stop daydreaming, and begin to be now what you will be hereafter



Rewa Shukla 3rd sem
Biotechnology



Do you speak English Fluently or Correctly?

Despite having a strong background of English medium schooling, many students face problem of hesitation for public speaking in English media and those who have Hindi medium schooling also face same problem.

Most of them manage to speak fluently in English media but fail to speak grammatically correct.

Now most of you must thinking this is another article from trash of undoubtedly "good to listen but hard to implement" kind of suggestion or advice lists which you can find in internet or from any other XYZ spoken English tutorial online or offline. But it's not.

This is from my personal experience and let me tell you one more thing I had my first half schooling from Hindi medium and second half schooling from English medium so I'm equally biased to both the group.

When I switched to English medium school, it was like the letters are dancing to make formation in terms of ant force, each one having its own role to play independently. None of them mean alike. To build the logic of pronunciation of different words took my one academic session. As we are not from place where we can find everyone speaking in English, so understanding the meanings of various words and their pronunciation doesn't come naturally

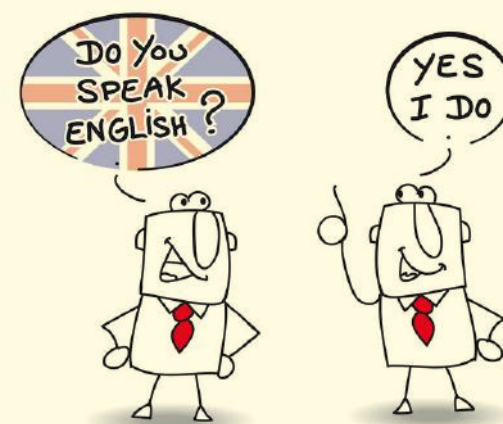
unlike in your mother tongue. So progressively and slowly to communicate in English becomes your job and necessity, not your habit

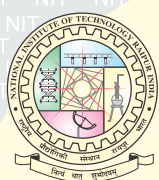
How to improve English?



which is the main reason behind piling up of under confidence both in your communication skills and ultimately in your personality.

So I decided to make it as my habit of talking in English when I was in a city where my school friends didn't know Hindi. This is the reason I give credit of my good communication skills in English to Vizag. Henceforth my first suggestion is "make it as





your habit of speaking in English". As we spend lots of time in thinking sometimes daydreaming and many people have habit of "talking to self", here comes the next suggestion "Not only talk in English but think in English".

You must have got suggestion from everyone to "Read books and newspaper everyday", but this is not that easy for most of the people because we spend leisure time watching movies or television shows, listening to songs and chatting on WhatsApp. When I decided that by hook or crook I want learn to English, then why cater extra time for it if I can turn all my activities in my life watching movies, listening

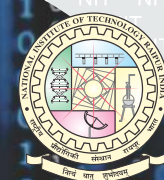
to songs, chatting on WhatsApp a way to learn to English. So I began watching Hollywood movies when I wanted to watch movies, started listening to English songs when I wanted to hear songs, started chatting in English. In this way every activity of my day today life helped me in improving my communication skill in English. So my last but not the least suggestion is "Let your Entertainment also be in English media". At the starting you will not be much comfortable with full documentary movies which are full of dialogues, so begin with action movies or sci-fi movies then go for comedy movies and finally land onto documentaries. Coming to songs, music of the track

forces one to learn the lyrics and sing along and keeps on playing in our mind for sometime. Hence choose your list of songs wisely.

One last suggestion "Don't translate each and every sentence while speaking. Don't be afraid of committing mistake. These mistakes will fill you with zeal and determination to speak English correctly." Make a group of people of both who are good at speaking English and who are learners, make a habit of conversing only in English and tell the other person correct every other person upon her or his mistakes. I'm sure this is going to work without fail as it worked for me.



G. Lavanya 5th sem
Electrical



Entrepreneurship-Implementing Ideas

Coding has become one of the modern time hobbies which most of us have inculcated in our lives. CodeChef, being a frequently visited website for these coders, supporting over 50 different programming languages. But has anyone given a thought to who might have arrived at the very concept of actually starting up a website like this? Meet the Turakhia brothers who are unknown internet entrepreneurs who turned into millionaires. In January 2014, when the NASDAQ (the second-largest stock exchange in the world) listed Endurance International Group announced the acquisition of their web business of Directi, CodeChef being a

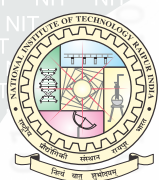
subsidiary of it, made Bhavin Turakhia, 34, and brother Divyank, 32, sumptuous by over Rs 620 Crores. This is the power of entrepreneurship.

Entrepreneurship has traditionally been defined as the process of designing, launching and running a new business, which typically begins as a small business, such as a start-up company, offering a product, process or service for sale or hire. It can also be defined as the capacity and readiness to develop, organize, and manage a business venture along with any of its risks in order to make a profit. The term entrepreneur, a French word, was coined by a great economist Jean-Baptiste Say and has often been translated as an adventurer.

Rather than working as an employee, an entrepreneur runs a small business and assumes all the risk and reward of a given business venture, idea, good or service offered for sale. The entrepreneur is commonly seen as a business leader and innovator of new ideas and business processes.

Entrepreneurship demands a lot of risk taking capacity. But something one finds difficult doesn't mean one shouldn't try. It means one should try even harder. With the right tactics and hard work, people have seen that entrepreneurship has often been very rewarding. Everyone is creative but we are only as creative as we allow ourselves to be. So one has to let its mind wander around and get flooded with ideas. Not only this but a person should be able to take a firm step and be able to enact the ideas. Entrepreneurs are pioneers, innovators, leaders, and inventors.





There is no age limit to pursue entrepreneurship as a career; it's just a matter of an idea. It is rightly said, "An idea can change your life", and yes it did for many.

Kentucky Fried Chicken abbreviated as KFC has become a very prominent name among the top eating joints in the world. KFC was founded by Colonel Harland David Sanders. He had failed as a railroad conductor, an army man, an insurance salesman and was rejected from law school. He had also failed an attempt to kidnap his own daughter. He worked as a cook and dishwasher. At the age of 65, after he retired he received a cheque of \$105 from Government; he felt that the Government was saying that he could not even provide for himself. Mr. Sanders was ready to commit suicide. So he sat under a tree writing his will but instead ended up writing all the things he would have accomplished in life. That's when it struck him that there was one thing at which he knew he was the best, cooking. He borrowed



\$87 against his cheque and bought and fried up some chicken using his recipe and went door to door to sell them in his neighbourhood in Kentucky. Now at the age of 88, Colonel Sanders, founder of KFC Empire is a billionaire. So it proves that age never limits you. It's just a matter of an idea and a firm step.

Entrepreneurship has always helped talents emerge out. Eco-entrepreneur Laurence Kemball-Cook was a final year student when he set out to turn footsteps into electricity. Today his Pavegen paving tiles has become a multimillion-dollar enterprise. Narayana Peesapaty came up with a great idea of making eatable cutlery. Even young talents like Anubhav Wadhwa, a young entrepreneur of 17, founder of Tyrelessly, provides better solutions of disposing of used tyres more efficiently. And the list just advances forward.

Entrepreneurship is being highly appreciated. With great initiatives like Make in India, Digital India by our Honourable Prime Minister, start-up companies all over India are being recognised and are being provided with a platform to come up with something productive. It is very encouraging to hear that students from our college are taking a step forward by implementing their ideas with recent start-ups like Nerdy Academy, CleanZo, Vegknock, Foodinger and many more.

As quoted by Malcolm Forbes, "When you cease to dream you cease to live". So everyone dream big and always keep lighting the spark in you.

Don't forget the more you dream, the more you will learn and the better you will deliver.



Kavya Sharma 3rd sem
Biomed

INTROVERTS AND THE WORK CULTURE

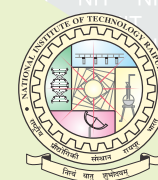


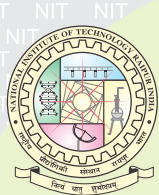
Recently, I came across one article on social media. It was from Susan Cain's bestselling book "Quiet: the power of introverts in a world that cannot stop talking". The book revolutionised the way introverts were looked at. People like Bill Gates appreciated this book and millions of people around the world including artists, actors, entrepreneurs and others came forward as they could feel connected.

Let us be honest. Today's work culture is the worst nightmare an introvert can have. The office culture is too biased towards the extroverts. People talking to each other; constantly chatting about the past weekend; making relations

with each other which seemed so fake and irrelevant and were only aimed at extracting profit and indulging into office politics for promotions. What introverts know is how to work. They feel if they eventually do well, they will be promoted. They are more inward and are more concerned with the quality and the process of learning. The noise of the other counterparts, the constant shutting of doors and the continuous ringing of phone calls frustrates them. The distraction due to the various meetings that takes place any time drains their energy and leaves them exhausted. The initial period of every meeting involves that period of small talk which every introvert would

hate to do. I am not saying that they should not work out of their comfort zone. This is how they will grow and learn, but why can't we create such an environment which has more space for quiet individuals and allows them to work on their own? An employee taking his lunch alone is discouraged, left alone and isolated. Why is it so? It's strange to see organizational skills and group work being prioritized. Team-oriented environment is being given more importance but are these the only skills required? What about creativity, thoughtfulness, imagination, innovation, curiosity and originality? People having ideas can work wonders. If the entire world is ruled by dominant



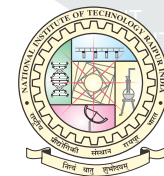


people all around who are more interested in speaking and not innovating or changing, harmony will be disrupted. A perfect balance is required between both introverts and extroverts in order to create a better world. Craving for solitude does not mean that you are anti-social, and this in no way shows your incapability to work in groups; in fact these days it's more important to teach people how to work independently. This constant distraction hampers their creativity and lessens their productivity. Introverts are meant to innovate so why not allow them to work their way instead of forcing things on them. Extroverts may rule the world, but it's introverts who create the world. It's high time when we develop a mutual understanding amongst each other. Introverts have ideas and extroverts have an ability to reach out to people. When combined both can produce excellent results and attain maximum productivity.



Ayesha Swaleha Quereshi 5th sem

Electrical



F^{OOTBALL}

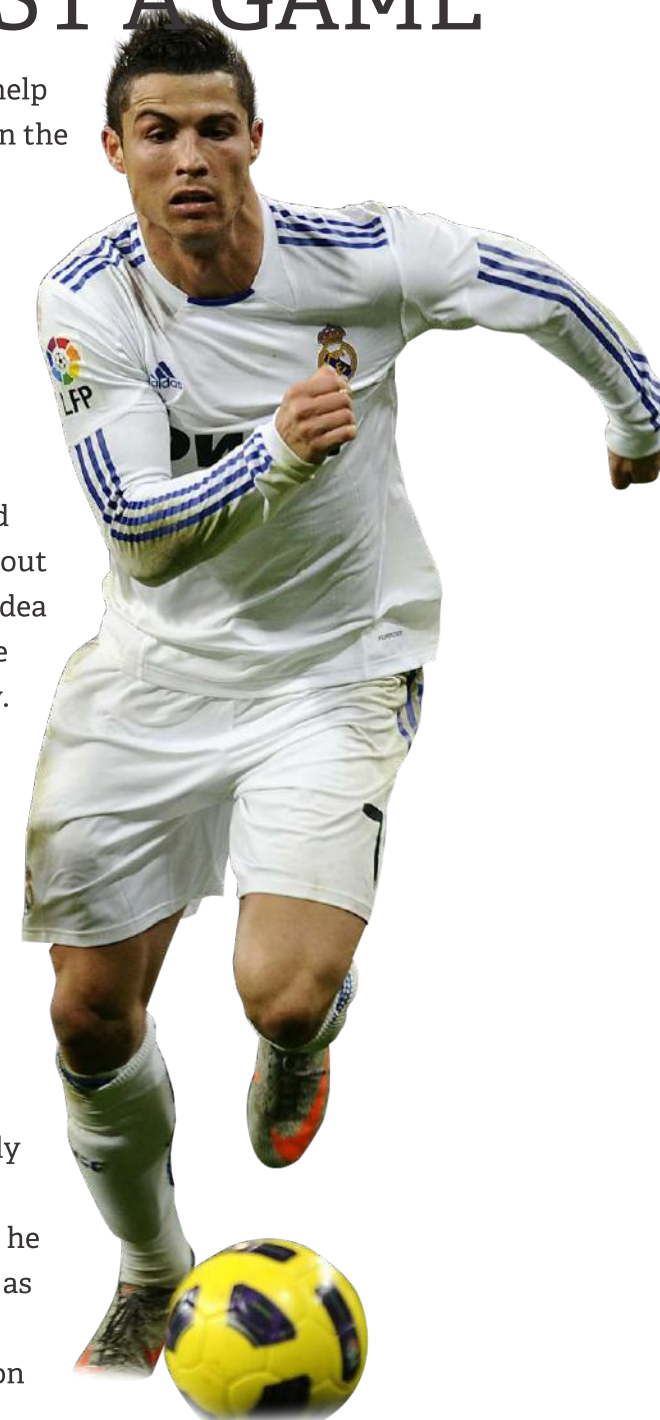
"MORE THAN JUST A GAME"

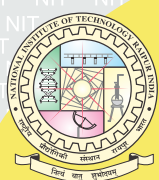
The year 2016 is past us and it had its fair share of surprises as well. Well, to be fair, it left some of us flabbergasted, wondering at the interesting turn of events that unrolled before us

It would be fitting to start with Leicester City led by the Italian Claudio Ranieri .He stepped in as Leicester City manager drawing much criticism and the what followed was no less than a fairy tale. He led his side to Premier League glory beating the odds stacked 5,000 to 1.The club was devoid of a star studded lineup and proved that hard work, determination, team spirit and discipline are key to success .Ranieri used unique and out of the box ways to get the best out of his players taking them out for pizza after a clean sheet win and he went on to gift them bells for Christmas

saying the bells would help his players to wake up in the morning.

Another major surprise was Portugal lifting Euro 2016 in France beating the home side in a closely contested final at the Stad de France. Portugal arrived in the tournament without having the slightest of idea that they would win the Henri Delaunay Trophy. Portugal managed to creep out of group stage and make it to the last 16 drawing all of their 3 group game and then went on to win the final in courtesy of an extra time winner by Eder. Cristiano Ronaldo finally added an international trophy to his collection; he had a phenomenal year as he won several awards. With Real Madrid he won the UEFA Champions





League and FIFA Club world cup, he won the FIFA Ballon d'Or and the best player award. All in all it was a terrific year for Ronaldo and he would hope it's one in many to come

As Ronaldo got his share of limelight it was a bittersweet year for Antoine Griezmann. the young French lad lost in UEFA Champions league final, UEFA euro 2016 final and also did not feature in Fifpro team of the year but still managed to wear a bright smile at the event and portrayed a beautiful picture of sportsmanship. It wasn't all disappointment however for him as he won the top goal scorer and the best player of tournament award in Euro 2016 in his home country and



Kapil Bedekar 1st sem
Metallurgy

became a fan favorite.

La Liga was dominated by the Catalan giants Barcelona and their trio of Messi Neymar Suarez netting 46 goals between them. Barcelona also triumphed in the Copa Del Rey

The big news in EPL was the signing of Pogba for 105 million euros by giants Manchester United they also acquired Zlatan Ibrahimovic and Henrikh Mkhitaryan

So far United have shown lack luster performances despite the big names and along with Leicester City

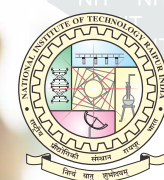
have proved that money is not everything in football. However they would be hoping to pick up their form in the new year

It is a herculean task to sum up the entire exciting year in a few words so let's just hope that the year 2017 brings us some great footballing action.

The year 2017 promises to be a mouthwatering one for all the football fans across the globe. With all the football action on the offer it lets hope that 2017 will be a delight.



Liberalism -A rising cultural ideology



Liberalism includes a broad spectrum of political philosophies that consider individual liberty to be the most important political goal, and emphasize individual rights and equality of opportunity. Although most Liberals would claim that a government is necessary to protect rights, different forms of Liberalism may propose very different policies. They are, however, generally united by their support for a number of principles, including extensive freedom of thought and freedom of speech, limitations on the power of governments, the application of the rule of law, a market economy or a mixed economy owned both by the state and the private enterprises.

Like the similar concept of Libertarianism, Liberalism

believes that society should be organized in accordance with certain unchangeable and inviolable human rights, especially the rights to life, liberty and property. It also holds that traditions do not carry any inherent value, that social practices ought to be continuously adjusted for the greater benefit of humanity, and that there should be no foundational assumptions (such as the Divine Right of Kings, hereditary status or established religion) that take precedence over other aspects of government.

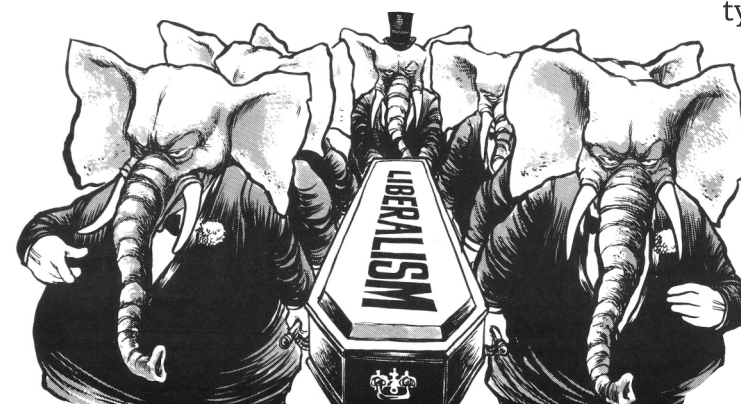
Anarchism is a much more radical form of Liberalism, although, like anarchism, Liberalism historically stands in opposition to any form of authoritarianism, whether in the form of Communism, socialism, Fascism or other

opposition to any kind of collectivism, which emphasizes the collective or the community to a degree where the rights of the individual are either diminished or abolished. The word "liberal" derives from the Latin 'liber' (meaning "free" or "not a slave").

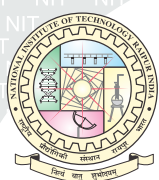
Types of liberalism-

There are two major currents of thought within Liberalism, Classical Liberalism and Social Liberalism:

Classical Liberalism holds that the only real freedom is freedom from coercion, and that state intervention in the economy is a coercive power that restricts the economic freedom of individuals, and so should be avoided as far as possible. It favours laissez-faire economic policy (minimal economic intervention and taxation by the state beyond what is necessary to maintain individual liberty, peace, security and property rights), and opposes the welfare state



types of
Totalitarianism.
Its emphasis
on individual
rights
(individualism)
also puts it in



(the provision of welfare services by the state, and the assumption by the state of primary responsibility for the welfare of its citizens).

Social Liberalism argues that governments must take an active role in promoting the freedom of citizens, and that real freedom can only exist when citizens are healthy, educated and free from dire poverty. Social Liberals believe that this freedom can be ensured when governments guarantee the right to education, health care and a living wage, in addition to other responsibilities such as laws against discrimination in housing and employment, laws against pollution of the environment, and the provision of welfare, all of



which would be supported by a progressive taxation system.

Are liberals intolerants?

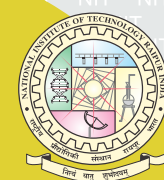
Liberalism needs to recover the noble lie that ideas are not politics by other means. Robert Frost once famously defined a liberal as someone who could not take his own side in an argument. But contemporary constructions paint an opposite picture: Liberals are seen as self-satisfied ideologues with no stomach for a diversity of ideas. Exposing the political hypocrisy of liberals has become a rhetorical gambit to delegitimize the idea of liberalism itself. Alas, it has to be said that those who use this gambit have much ammunition to deploy. But there are also other sources of concern. Liberal institutions, rather than becoming shelters for diverse ideas and genuine contestation, were turning into monoliths of political correctness. Liberals were supposed to be able to think out of their skins; now they imprison themselves in boxes.

There are other social charges against liberals that do have

resonance in society. The charge that liberals are elitist has some merit to it; the fact is that in its mode of articulation, contemporary liberalism comes across as dripping with a kind of condescension for a complex set of cultural articulations. Liberals also come across as less imaginative: So colonised are they by politics that the kind of imaginative ardour and complicated understanding of moral psychology that liberals were good at (think of Milton on Satan, or Isaiah Berlin almost making Joseph de Maistre attractive) is becoming rarer indeed. Liberals need to stick to their convictions of treating individuals as free and equal beings; but they could benefit a bit from Robert Frost's reminder, that a generous imagination, not the certainty of platitudes, especially in history and culture, has been liberalism's biggest ally.



Nishant Ranjan 5th sem
Mining



LIFE is what we make it

When I move back I find that I had been tying my shoelaces wrong my whole life. I was the one who locked myself in midst of problems and agonies. Actually, it is PREETI SHINOY, who changed my perspective regarding life and compelled me to put my views on LIFE. Even my topic is inspired by her best seller novel "LIFE IS WHAT WE MAKE IT." Preeti Shinoy –great writer who believes that life is the biggest teacher. She believes that one's hope, determination and perseverance can even change the destiny and it is true. Many of us take life as a problem. But life is not a problem to solve it rather it is a reality to experience and to live. Life is full of ups and downs, right and left. It is a journey of happiness with some breakers of sadness.

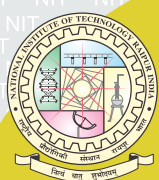
Remember that never live life just to breath but live it with full zeal and enthusiasm. Many times it happens that all we regret our past. In school we think childhood was the best, in college we say, school life is the golden life, during job we miss our college, a married man wants to live his single life again and after death we wish for our life back. So live in the present because

"Broken mirrors can't be mended". Many of us lose ourselves while panning the future and can't see our little

but worthy happiness which is playing hide and seek in our present.

Saint Teresa said that "Our life begins to end the day we become silent about things that matter". It happens to all of us; often we are quiet at times when we should actually speak. Because we are too sensitive towards our society and we folds our hands before our actions. Life is not easy for any of us. But what to do with that? We must have perseverance and above all confidence in ourselves. We must believe that we are gifted for something which we must attain. All creatures born on this earth are adorned with





difficulties, challenges. What one should have is potential to face them and have patience with all things, but chiefly have patience with yourself. Do not lose courage in considering your own imperfections but instantly set about remedying them as every day begins a new task. Courage and perseverance bear a magical talisman before which difficulties disappear and obstacles vanish into air. Dare to face fear. The first step to success is to have trust on yourself. Those who suspect their own decision they always live with depression and disappointments. Why are we not happy with our life? It is the bitter truth that mankind can never be satisfied. We are not convinced with our life.

Swami Vivekananda preached that “GOD gives us everything what we need not we want”. The life for what we regret there are many one who wish for that life.

If you really want to make your life then never let others control your life. Be your own boss, be your own employee. Break all the chains because only free birds can measure the height of the sky. Listen to everyone but do only what your heart says. There are plenty of people who like to censure you but listen only to them who say ‘Yes, you can do it’. All of us do not always get complement that we want from others and many a times it leads to give birth, a sense of inferiority in our

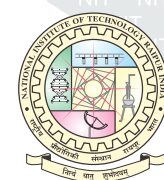
mind. Those lousy thoughts grab our mind forever and generate lot of agony.

Question is that who will be the sufferer? Neither our family nor friends, but only us. To be happy in life, think out the box; look on the aspects of the life. Life is as beautiful as our thoughts.

Sun rises and sets, flowers bloom and fall away, people take birth and die but the life , life never ends and as long as people live, stories must have life at the end. Life's tragedy is that we get old too soon and wise too late. It is beautifully quoted by Winston Churchill “It is not length of life but depth of life, which is important”. Isn't it?



Bhawana Sahu 1st sem
CSE



MEMORIES

“Behind every amazing daughter lies a great father.”

The most supreme man in a girl's life can be none other

non-girly “tom boy” look. Then we used to return home on our wrecked paradise, his scooter. I would sit behind and would tightly clutch his giant round tummy. All my fear of falling vanished into thin air when my hands held time tries to retrace its path. I fall into the lap of memories. Memories of the days spent with him, memories of crying in the safest couch, his lap.

Maa would cook me a delicious food and I won't have it without my father. He



than her father. This indeed is a true statement.

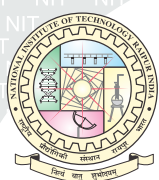
I remember the Sundays spent, when It we used to go for haircuts. I used to go fussy and resistant. He would take me to the salon. He would sit behind me during the haircut and instruct the barber to give me his favourite but a

him. Oh! And those acts of being a sloth in lazy Sunday afternoons, I have all those streams of high definition memories flashing before my eyes.

It's been almost a year and a half I lost him. Sometimes, while sitting alone, emptiness consumes me from within,

fed me until my tummy brimmed. With all the jokes passing round the room, the lunch was always a splendour. And me being so addicted to his company, loved his off-job days, the Sundays.

Dad was a government employee He was tall, a bit on the heavier side. He was dark.



I proudly resemble him.

I remember the feeling of brushing my hand against his stubble. I am a typical daddy's girl. I used to desperately wait for him at our entrance to home. When I heard the familiar sound of his scooter at the nearest turn from our home I would run with all my might to the main gate. I used to watch him bringing his scooter in and park it. He then used to pick me up in his arms and we walked into our home.

Like this a million more memories are embossed in my mind rather they will stay etched in memory forever and always.

My father was a philosophical person. Every night at dinner he used to tell us his stories, how difficult his life had been and what all he has learnt from it so far. He always said "life becomes tough for those who bear the strength to bear it." Little did I know that his words would

mean so much to me now when we are lives apart.

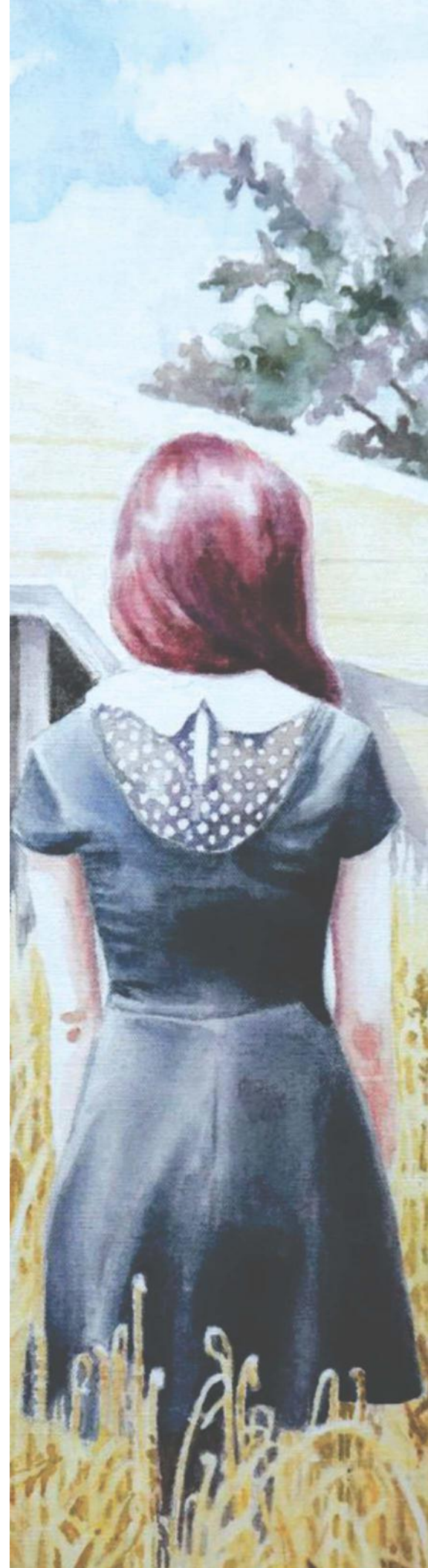
Sometimes, in the night, when I try to sleep, memories come chasing and I find myself back in those days but this time as a mere spectator. Tears come streaming down and seep into the pillow.

As rightly said, "Lights will guide you home and ignite your bones and I will try to fix you." #Coldplay.

For me he has always been that light which guides my way in the darkness. I am a mere human, prone to errors. But I have my trust bestowed upon him. He will be always there to fix me when life breaks me down. For a girl, her father is the one to whom she looks for support, strength, love, care and wisdom. The fact that my father is no more physically present with us, doesn't make this fact less true. I know I always have him by my side.



Ahuti Mishra 3rd sem
E&T



POWER OF GOOD SPEAKING SKILLS



A right word spoken can make a person's day or break his heart, inspire a nation and lift spirits or destroy self-esteem, convert a smile into tears or propel a man to highest peaks. The power of speech or rather the gift of speech is probably one of the greatest gifts to mankind. The words of wisdom has made magnificent histories, won great battles, has made people realise that sky is the limit. At the same time words of dismay has led to demolition and

despondence.

Also, people having good communication skill can express

better and hence succeed in their goals. If we see in a broad view, we have great orators as great achievers be it Mr. Barack Obama or Mr. Narendra Modi.

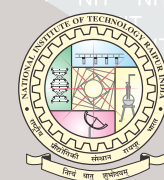
People around us who frame well out of the ocean of words sound more

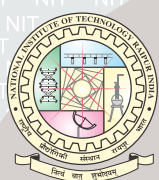
convincing and interesting .We usually indulge more, while talking to them and we feel comfortable while expressing to them.

This skill is not developed in a day but helps in long run. A soft spoken person at times fetches good friends, good companion, make their neighbours at their pinks and even sometimes fetches good opportunities or choicest jobs. All it needs is patience and thinking a bit before speaking, exposure to unacquainted surrounding and good hold over vocabulary, then only a person can be crepuscular. Not being impulsive and control over sudden overflow of emotions also can help. Sometimes, words spoken in anger can ruin relationships. A stable mind set and pleasing soft skills are positive repercussion of a soft tongue. So, we all must try to achieve this acquisition.



Aditi Manikpuri 3rd sem
Biomed





The Swan's Best Friend

Once upon a time there was a guy named Hulio. He lived in the woods deep in the forest, a life very different from anything that any of us has ever seen. He was but gifted with a power that he could make sense of anything that would come out of a wilderness's throat. And so he never made a human friend and lived a life free from any corruption.

But all he had was his friends from the jungle with whom he would share every giggle and every sigh. One among them was the white swan. She was as white as snow and with a heart as pure as a crystal. He would sit by the pond and spend all the time with her. As she was his most valued friend. But one day

when he came of age and developed the strength of a horse, the swan realized what was the right thing to do and told him, "what is it that you would do with your life, Hulio?"

To this he thought hard and wondered, but nothing came to his head. And then he asked, "Why should I ponder? I have everything that I need. Why is it that I would have to work?"

The bird enchanted, "Everyone has to work, some work for money, some for fame and some for pride. And you my dear love should work too for you are the special one". Upon seeing that he couldn't decide as to what he should do, she asked "What is that you like the most?", to which he very foolishly replied, "Spending time with you".

She told him then that she is but his friend and he must go upon himself to work so that he could see the

bigger world, his world, the world which was created by the likes of his own because she knew that it's where he belong.

Hulio was as reluctant as ever to this and to make him understand she asked, "What is it about this place that you would spend hours with me here?"

And then she learned about the love that he had for water. So she told him that, "You shall build a boat for me, for I am old and my flappers hurt. I fear soon I shall drown!"

To hear this was painful for our hero as the swan was his only friend. He started his task and the swan helped him. He worked his life out on this. He would himself cut the trees and make logs out of them, tie them together with banana leaves and carve out designs with his bear like hands.

Everyone in the forest, the deers, monkeys, giraffes and the squirrel came to see him work. Even the lions and the elephants paid a visit. In the meantime, the Swan went

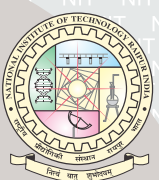
missing but Hulio didn't notice. When he did notice he went panicky. However he found a note in which she wrote that she would be back and that he should complete the boat till she returns. Abiding by the instructions, Hulio did work. He worked hard as ever. But when he would get time off his building he would look for his friend, the other animals stopped him as she had mentioned that under no circumstances should he look for her. But nothing could stop him and everyday he would dedicatedly look for her after his work was over. All in vain!

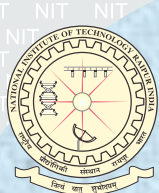
One day while Hulio was sleeping, he heard a familiar song. He woke up in utter thrill only to find that his friend was back. That night was the happiest night in Hulio's life. They sang and danced together and celebrated the Swan's return. Although there was a deeper truth behind her being missing.

The next day Hulio worked like a horse. He proposed a condition to the Swan that

she would stay by his side the entire time or else he would not work, to which she agreed. That day was the happiest working day for Hulio as his friend was with him and they sang many songs in between the work breaks. It took 7 more days and finally the work was complete. This was the most beautiful little boat anyone in the jungle had ever seen. It was a day of triumph for Hulio, but more than the boat, he was happy about the last week that he had spent with the white swan. He was also relieved that now finally he would get to relive the time before he started working when he used to spend all his time with his friend by the pond. He was also happy dreaming about the places he would sail to with the swan. Right up the alley!

Next day, the swan went missing again. Hulio was again in the panic phase. The swan came back the same day in the afternoon and asked Hulio to come with her as she had found a place perfect for the first sail. But something was very serious about her vibe. Innocent as a baby, Hulio agreed with passion and was very gay about the trip. The trip was a delight for him. He had the best time





with her. All this time Hulio thanked the lord for giving him a friend like the swan. He said it to the gods that he needs no one apart from her and that he thinks he has a gifted life, with no evil trace of human in his blood or anywhere near him.

After a long sail, they reached a valley and the Swan told him to stop the boat. Hulio was confused at first but then saw a huge boat coming at them. There were a handful of people inside it with wide grins. Hulio looked at the swan who was near tears. He asked her as to what it was. To which she replied, "I am very sick. If not treated properly, I might be gone. And so I want

you now to go on and learn about books with these people and come back and cure me. You must also take this boat for it will keep you motivated and remind you of my friendship".

He said with a dull face, "I don't want to leave the jungle and I don't want to leave you. You are my best friend, my only friend. How would I live without you"

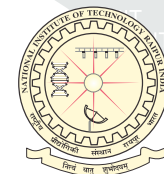
To which she said, "You will be back soon my dear for these people are also my friends and after all you're going to save my life". Hulio tried to refute by saying that he could learn medicine from the elephants but the Swan had made up

her mind.

Hulio left with a final song and the swan stood there looking at him, crying. She knew how much she needed him. But believed that this was the right thing to do. She came back to the pond and to the jungle. As she sat at the bank, she found a list of places that Hulio had made that he wanted to sail to with her. Looking at it, with tears in her eyes she stood there. A moment later the squirrel asked her, "When would he come back?". With a pained smile she replied, "Never".



Sameer Tiwari 5th sem
IT



The Journey to Sainthood

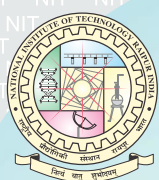
Mother Teresa will enter into sainthood on September 4, 2016, after a relatively short period of 19 years since her passing away on September 5, 1997. Pope Francis recently recognised a second miracle attributed to her intercession which 'cured' a Brazilian patient, awaiting surgery, of an incurable infection in his brain. While the Church demanded one proven miracle for her to be beatified and another for sainthood to be conferred, the real miracle, I believe, was Mother Teresa's life itself.

Let me briefly encapsulate the many challenges that she faced when she began her work. She was 18

when she was convinced that her life's vocation lay in her becoming a missionary in far-off India; Skopje, where she was born on August 26, 1910. Yet the early seeds of her faith and determination impelled her to leave her closely knit family. In 1948, Calcutta's pavements were swarming with millions uprooted by the Partition, who had joined the hapless sufferers of the Great Bengal Famine. Into this sea of tragedy, homelessness, disease and despair stepped a 38-year-old nun, dressed not in a recognisable nun's habit, but a sari similar to what the municipal sweepresses wore.

At a time when the Raj had left no health care to speak of (1948), she confronted death at every turn. She did what was to become her hallmark. Finding a man dying in the street, she took him to a public hospital, which refused to admit him, precisely on the grounds that since he was about to





die they would not waste a hospital bed on a life they said they could not save! Only when she sat before the hospital on a dharna did they relent. The man died within a few hours. It was then that she began to search for a place where she could take those people whom hospitals refused, where she could nurse them — she had some medical training — and they could at least die being comforted and with some dignity. She begged various authorities, and finally an officer in Calcutta Municipality gave her a pilgrims' hall adjacent to the Kalighat temple, where she requested the police and municipal authorities to bring her all and any of those dying whom the hospitals refused. That policy continues.

By the time she passed away 19 years ago, she had created a multinational organisation that spanned 123 countries that served her special constituency of the 'poorest of the poor'. In the process, she was acknowledged as one

of the world's principal conscience-keepers.

She had a clear vision of the street and a determination that she often tempered with a sense of humour.

In the end, she gently but unmistakably left her imprint at the heart of the Vatican itself. She cajoled Pope John Paul II into opening a small soup kitchen around the corner from the Great Basilica of St. Peter's where the grand ceremony will be held to declare her a Saint. At four every evening, Rome's homeless and hungry queue up to be fed by Mother Teresa's Sisters and a dozen volunteers. At a stroke this frail nun, indisputably the world's most decorated person, helped to demystify the Vatican's centuries-old aura of wealth and power.

Source: *Mother Teresa* by Navin Chawla (*Biography of Mother Teresa*)



Debashish Parida 5th sem

Chemical



The Humanity SCENARIO

Recently, a picture of a malnourished and starving kid being served clean water (which might be the first time in many months) by an aid worker has been making rounds on the internet. To say that it broke my (and many others') heart would be an understatement. In a world where all of us are raised to be career driven and barely pay attention to ourselves much less to our surroundings, I am so glad that people like Anja Loven exist. The fact that she is not a celebrity or a WHO associate makes it even more real to be like her or approach her.

Literacy is not a term I consider appropriate in context of improvising the wisdom of population because it only means knowledge of communication and skills to help oneself survive but none of this would have helped Hope (the rescued kid) because he was a victim of accusations which were solely based upon centuries old stories that

y, racism or anything else that puts material outlook above human life . In addition to literacy we need to make people aware of the fact that none of the things stick around as the ultimate truth for centuries and definitely not something that was never the truth in the first place. We need to make them aware of the illogical and brutal practices in the name of tradition.

In my lifetime I have seen many incidences where poverty along with illiteracy has lead to so much adversity that human life has lost its value. Be it the old maid in the colony who despite being seventy had to work through thick and thin to make both ends meet or the children of another maid who could not continue education after middle school or the woman herself working immediately after her operation. Witnessing things like this is not something anyone of us is

people snake around themselves as truth (in name of tradition). Be it

untouchabilit

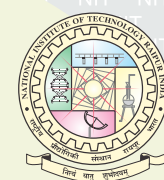
deprived of because there are plenty of such incidents around us. However when I see things like these I feel a jab in my stomach just imagining how I would feel if it were my parents, my grandmother or sibling in their shoes.

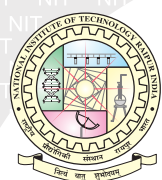
I truly understand that me pointing out the facts and stating how I feel about these situations isn't going to better any of them but I would call this more of my appeal to each and every one of us, while I deeply appreciate charities and NGOs who are solely focused on this work(which all of us might not be able to do due to piled up responsibilities), we can do the little things to help someone out because people together(anywhere and everywhere) make the biggest network possible. People like Anja Loven, Dr. Prakash Amte, Palanam kalyansundaram and many more gave us enough examples to realize that common people can be someone's savior too.



Aishwarya Bhawe 5th sem

IT





Thorny Thoughts

Most of the people are good architect of wounds irrespective of depth.

Wounds are the raw materials of success. Preserve them properly!

The Zodiac sign of a human brain is same as that of a sheath.

An earthquake is the hiccup of unceasing destructive developments which tells human that the 'death is missing you'.

An art of applying FAIR AND LOVELY on dripping wounds is called politics

Tears don't need any passport for trickling out.

This is an era of portability of Relations.

Air conditioners of expensive cars seems to be powerful because heat from empty stomach of footpaths can't enter.

Do KARMA and worry for the FRUIT as well because there are many creatures in this world for engulfing it.

When butterfly starts collecting nectar from boiling iron instead of flowers...perceive that BHAGAT SINGH is somewhere around you.

COINS make noise because they cannot shut the mouth but the NOTES are still silent because they can!

HUMANITY is surviving as a paying guest there in a FOUR BHK heart of human.

Try to see LINES OF FATE of a beggar that are buried under a coin... you will find them 'smiling'.

Acting to teach is good but acting of teaching is weakening the foundation of education of nation.



Mimansa Bisen 3rd sem
E&T



Our Education System

There was a time, when India was noted all over the world as a glorious centre of education and culture, where students from all parts of the globe used to pour in. The educational and cultural centers of Nalanda, Taxila and Prayag attracted students from places, as far as Egypt, Greece, China, Ceylon and Indonesia.

The existing system of our education is predominantly academic and theoretical. It is theoretical as a rule and piratical by chance. The student is taught lessons by books, but not lessons from life. In other words, he is provided with knowledge, but not with wisdom. He is obliged to know the history

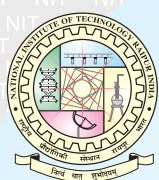
happening in our own country today. He knows more about the English country Council that about the municipality of his own town. Our education system is geared towards teaching and testing knowledge at every level as opposed to teaching skills. **"Give a man a fish and you feed him one day, teach him how to catch fishes and you feed him for a lifetime."** I believe that if you teach a man a skill, you enable him for a lifetime. Knowledge is largely forgotten after the semester exam is over. Still, year after year Indian students focus on cramming information. The best crammers are rewarded by the system.

of Greece of 200 years ago, but he knows nothing of what is

This is one of the fundamental flaws of our education system.

Our education system rarely rewards what deserves highest academic accolades. Deviance is discouraged. Risk taking is mocked. Our testing and marking systems need to be built to recognize original contributions, in form of creativity, problem solving, valuable original research and innovation. If we could do this successfully Indian education system would have changed overnight.

Memorising is no learning; the biggest flaw in our education system is perhaps that **"it incentivizes memorizing above originality."**



Chasing Pie in the Sky

Since childhood dreams were high,
Their inaccessibility never made me sigh.
But they always strengthened my will to achieve ,
Hardwork is the work I believe
The more I dreamt and I dreamt with open eyes,
I dreamt of probing and exploring new skies.
Had a clear vision of the goal,
intense passion drenched my soul.
Slowly
The vision went fade, and the morale too cascade



Aditi Manikpuri 3rd sem
Biomed

New city, new people, new problems girdled me,

Smoke of ignorance and oblivion forbade to see.

I lost the sight of my path, changed joviality to thwart and wrath.

But I'll rise again, I am mad but not insane

I am mad for being renown, and no force in this universe can bring me down.

I'll find my way out through this aerosol,

And will again target my goal

Confidence and perseverance will again equip my soul

If no airplane can take me to you, I'll walk I'll crawl to you.

But I'll pray to God to be with me, may he guide me and my deeds he shall see

So that I am never misled again , may he be with me with every joy and pain

Thankyou! !



Always

It's been a while since I have last kindled my love,

Ink on pages, intricate dance movements forming words,

Scribbles and blotches looking more beautiful

Than completely sized and aligned computer prints.

I thought I was being pragmatic,

I thought it was the way of time,

I thought I had moved on,

But there had always been a suppressed sigh,

With each Enter I hit and each backspace there was.

Slowly it seemed I was drying up,

Words not ready to come out, ideas no more fluid.

Am I over? I thought with despair

My mind refused to agree to it, my subconscious,

Still trying, brought you back in my dreams.

I started fantasizing, your looks and feel...



Nandini Bandyopadhyay 7th sem
E&T

I realised I wasn't ready yet,

I realised I had to have you **back**,

I realised I need you, now and forever.

But my dear, you have not **been** easy,

I sought you, you eluded me...Oh cruel, cruel!

But this time I didn't give up.

Finally after hopes, dreams and despair,

After toil and patience and **fear of** failure,

I had you in front of my **eyes**

The same you...Oh pretty **you!**

With you my eyes had fire,

With you I was no more lazy or tired,

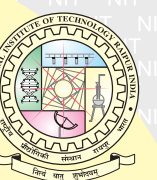
With you I had a new **beginning**,

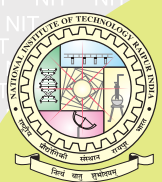
With you I had my all.

Hands and face smeared **with ink**, words raced on paper,

Yes, I was back again, this **time with** my **FOUNTAIN PEN**,

I look at you and say 'always'.





The awkward silence haunted him
 The darkness concealed upon him
 No where to go he found
 Searching for an orifice all around
 Wherever he went...
 He found none other but him
 Where was he trapped....?
 Why was he trapped...?
 What can be done now?
 Answers were in-scripted invisible
 Surrounding walls, Inconspicuous
 He tried and tried
 But couldn't break through
 What was this space?
 Was this the place....
 where the humanity resides?
 Under which all its blackness it hides
 Someday he might find a way out
 But for the time....
 He is under this EGO crown



Ayush Soni 3rd sem
 Mechanical

Dear
PA,



For standing by me
 when i was hit,
 Healing me again, bit by
 For forgiving me a thousand times,
 For I later realized my crimes.

To let the breeze blow in my backyard
 To pull my head away from reck
 For all hustle bustle and fights,
 Forcing me to try only rights.

To linger around me in that open sea,
 To trust me when all about were doubting me,
 I thank you to accept my every bit,
 A little kid unknowing where to fit.

Because a part of my soul lies with you
 And in my backpack I can spot ur part too
 But don't worry, I would take the best care of it
 As Idid since I was born.



Jayishnu Roy 3rd sem
 Biotech

I'm an Entrepreneur

You may call it a business,
 for me it's a craziness
 I think and think on hard,
 hover over my thoughts
 After a diligent workout, the
 fresh idea sprouts
 I believe in my own idea, and
 make you believe it too
 Grab your attention cleverly,
 offer my things to you
 Yes, I'm a thinker, I'm an
 innovator
 Also a good orator, I'm a
 presenter
 I'm an entrepreneur
 I make sure cash keeps

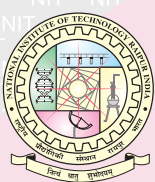
flowing and ensure bills get
 paid
 I have to manipulate for
 business shouldn't be dead
 Project positive business
 image, tell "what you need, I
 sell"
 Without proper marketing,
 even best products fail
 Yes, I'm a manager, I'm an
 organizer
 No, I'm not obnoxious; I'm
 just a self promoter
 I'm an entrepreneur
 Paychecks neither come
 easy, nor do they come

consistently
 Lots of crucial decisions I
 have to make frequently
 I keep the system in place,
 from falling into disgrace
 Limit the hats one wears,
 share tensions and shears
 Oh! Yeas, I'm a fighter, I'm a
 risk-taker
 And, I'm a leader, I'm a
 motivator
 I'm an entrepreneur
 Successful in a new fashion
 because I work for my
 passion.



Anupriya Singh 3rd sem
 Civil





She!

She is the light!

A beautiful soul, yet a feral
one

Frantic of the fact that
someone can be her beloved
too!

No! Not scared, she refuses
this fact of loving someone!

A raw one to see,

One can easily crave for!

Try and reach and she will
disappear,

Be with her and live!

Until the sun is dawning,

She can sing you thousands of
rhymes,

Sit next to you, until you're
done with your thoughts.

Listen you and advice you,
hug you and you will forget
all the anxieties!

Affection is what she carries!

Endless talks, walks and
everything seems a sudden
wonder!

Notify her when it rains, and
she'll dance with you.

Going mad, weird and all silent
the very next moment.

Adorable to spend everything
on,

Hand in hand and going long.

A free spirit, calm mate and an

excited mess,

Until and unless one expects
her to be bound, she is here,

With all of these undefined
moments, she is with you,

Until you don't ask who she is!

Until you don't need a
commitment,

Until your brain binds your
heart to give it a name,

Until you try to take over her
identity,

Until the beginning of any
materialistic feeling,

She is here, another beautiful
connection!

Aditya Basawatia

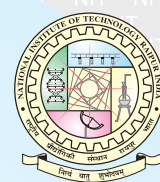


Far away she had gone,
leaving me all alone.
Before I could say good bye
The train had passed by,
I gazed at her saying
"Cheers"
But I saw her dark sparkling
eyes were full of tears.
Far away had she gone,
Leaving me all alone.



C Jayashree 1st sem

CSE



Only realities I
know
sometimes

And one day I
realized,

With deliberation, that I
can't always

Every time
I've felt down, or just sad

A melancholy I don't
understand, I

Go ahead and search for
answers

Everywhere, but inside myself.
All I

Find are fancy words and
platitudes

Telling me I must love myself,
even on

Days I can't I look into my own
eyes

As I stare at the mirror, the
facades

That I paint on my face, they're
the

Love myself, because I'm the
only one

Who sees the ugliness behind
the powder

And colour, and pretty words
that hide

A myriad of bruises, deep
purple, black

To blue, to pale green, and
yellow, that

Look like galaxies, and hold in
them

Anger and pain and worth a
few.

I'll stumble, I'll fall,

But I'll learn eventually, as
I'll find love to give, I'll find
within myself, a

Little spring of love, a little
oasis within myself

That doesn't need
rationalizations, and the day

I'll find this, I'll find a best
friend in myself,

One who'll never leave, and one
I'll dress up for

Even on days when I don't
have to meet anyone

Because I'll love the person I'll
meet in the mirror

And I'll look at mirror, and
proclaim, 'Yes, that's me.'



Shashwat Soni 3rd sem

E&T

Life is a path

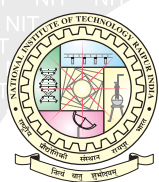
To go the way or not to go,
To stand the truth or let it be so,
To smile the stones or shy away,
To gather the courage or die away.
To stay beloved or close the heart,
To give away or remain a part,

The choice is yours to choose,
The decisions may lead to lose.
But one thing you keep,
That smile is for you to reap,
A perfect confidence and poise,
Now you decide your peace or noise.



Mayank Singhal 5th sem

CSE



Until The Shades Fall

Whistles and applause, all I
can hear.

Stepping in The Great Life
Circus,

With staggered steps, smile
of the Dawn,

A fresher ignorant of the
Master's dread.

Served 'em rib tickling Jest,

Serpentine acts, juggled
alpha & omegas;

the Circle wavered;

Gleaned their bliss, pennies.

Lustrous Cheeks, inception
of departure.

Crowd chatters, time was for
Popcorn.

The sand dripped, specting
brochures was crime.

Me suffixed "Late".

Pause! Horizon was not me,
nor I was

A walk through meadows,
glory of dusk was me,

Something Insuperable with
rusted wings of fancy.

Rags of desire earthed, steps
staggered.

The screen swipes, Gravyard,
Gloomy Cheeks,

Autumn eve's dismay, the
background.

Brutus mourns, Master's
engaged tossing bucks.

Rays of introspection
strokes souls.

The Clock strucks Twelve.

Au Revoir! Ladies en
Gentlemen.



Rahul Kr 1st sem
Mining

*A lot more than joy,
She resides in my heart.
A lot more than
happiness,
She lies there...
Deep inside my heart.
Something more than
love...
She is embodiment of
love.
There's that power*

*That keeps me alive,
Gives me strength,
Vitalizes my life.
Viewed in many forms...
But there's that form
That's prior to the rest.
A lot more than worldly
power
She, my MOTHER,
Still remains THE BEST...!*



Ronak Pani 3rd sem
Metallurgy

PEACE

Some people find peace under trees

Some found it under oceans

Some found it on the peak of the mountains

But I found it all inside myself

Some people leave their families

Some left their professions

Some said it was the path of god

But I say it was betrayal of you to your society

Some people changed the world by forming religions

Some people changed the principles of life

Some even sacrifice their happiness

But I can still attain my peace in my happiness

Some blame others for every thing

Some point fingers to others for their own failure

Some try to attain silence from all around

But I say u should attain it inside yourself first.

If you feel disturbed, then the fault is inside you.

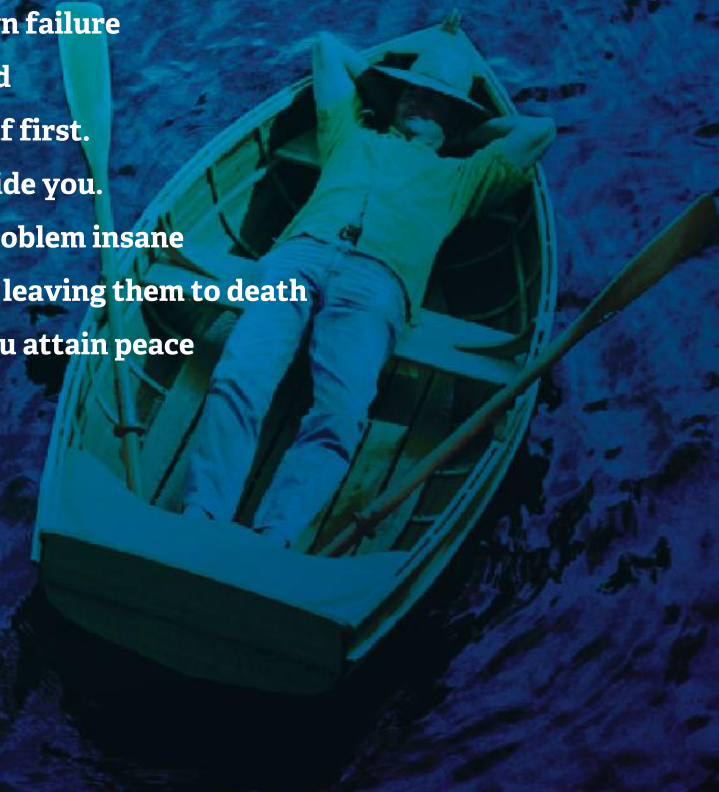
If you feel irritated, then there is some problem insane

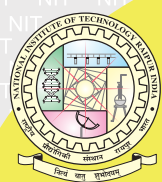
For that you put everyone in troubles by leaving them to death

I say just sit and be calm insane, hence you attain peace



Anoj Kumar Singh 7th sem
E&T





SaRaH

In a crowd of million faces, I saw her
Was she an angel?

I am sure my heart shouted a YES...
Her smile, so warm, it put my heart on hold,
As she filled the sullen air with gold.

Her eyes an ocean of mystery,
Shining a new star of hope and dreams of
infinity.
Her lips, children of roses,
Holds the kisses that can heal losses.

Her heart a fortress of her solitude,
A temple of love and kindness,
A warm fireplace for the one she loves.
Her soul, a Goddess forged into a mortal
form,
Yet a ship that fights in the fiercest storm.
My heart's drunk with her beauty,

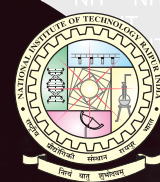
My eyes, my mind refuse to see anything
but this deity.

This heart has been locked for countless
eternities,
But what's this feeling?
The feeling of turning of the key to my
heart...

It seems the time has frozen
As she stepped into these desolated ruins
after ages.
My Sarah is Home!!!



Parag Abhishek 3rd sem
ET&T



A CRY OF DESPAIR

In the midst of a solitary copse,
Bordering the edge of a nearly dry loch;
Into quiet, silent thought I relapse
When I am rudely awoken by a loud croak.

My reverie broken, my senses heightened;
I flip around and scan the ground,
With the exception of a few snakes and worms;
There was not a sign of animal life around.

Puzzled and astonished, I scratch my head;
And conclude I have to search every pit and
hole.
Decided thus, I waste no further time,
And devote myself into the search body and
soul.

An hour and a half in the scorching heat,
Exhausted to the bone, I collapse into a heap;
In the cool shade of a banyan tree,
And subsequently fall fast asleep.

But, I am awoken again by a croak,
Loud, sharper and more insistent than before,
I sit upright, look around and;
Find the culprit who caused the uproar.

But alas, due to global warming, the pond;
Is a mere skeleton of what it used to be;

I see the frog jumping into every tiny puddle,
And I wish to God there were some more.

I am filled with great sadness,
As I realise it is the frog's fate;
To share the earth with the human race,
Who don't care for the destruction they
generate.

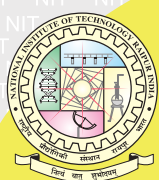
Every last bounty of nature we exploit;
But neither acknowledge nor replenish nor
care,
About any form of life except our own;
For earth is meant for us and why should we
share?

I dread the day humans will realize,
That we are neither monarchs nor kings,
But just another form of life on earth which;
Cannot sustain with all the destruction we
bring.

I end with a warning, a suggestion and a hope,
For if we fail to make immediate amends,
One day, our beautiful earth will be destroyed;
And human race will just be part of ancient
legends.

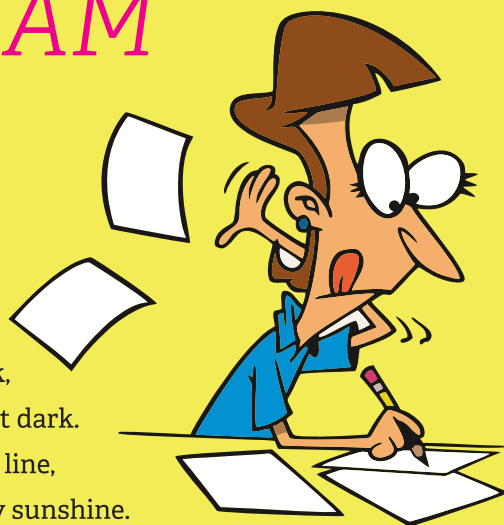


A.K. Archita 3rd sem
Civil

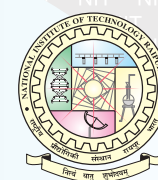
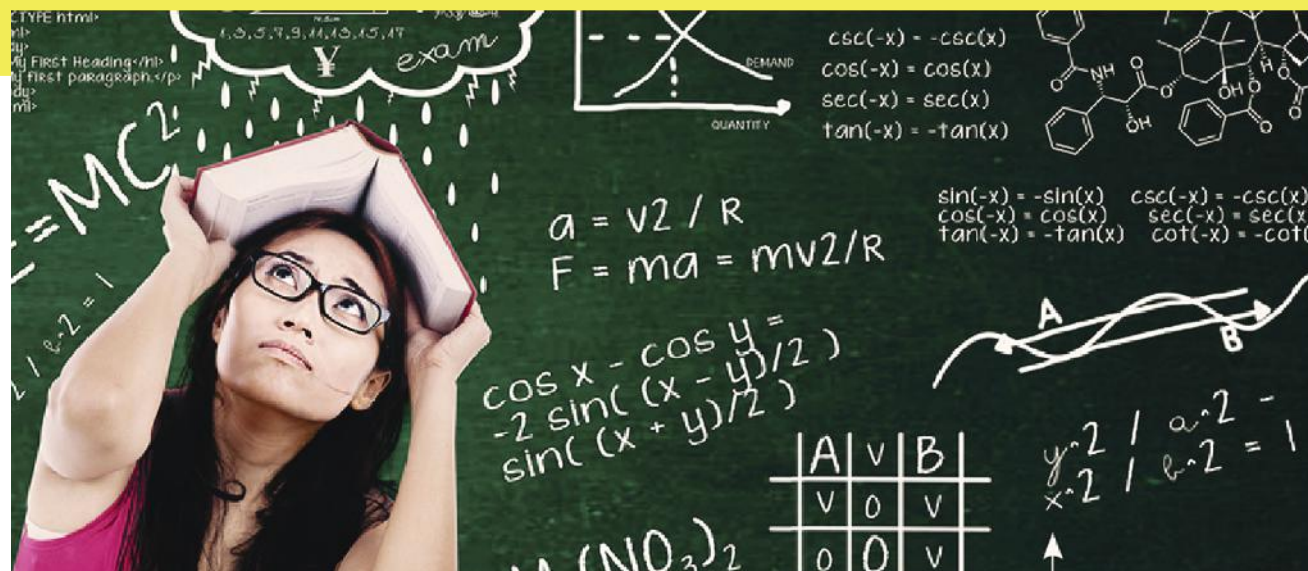


THE NIGHT BEFORE LAST EXAM

Last night of anxiety before exams with partners in crime,
Felt the same pressure which confronted the first time.
Two and half hours past midnight but lights still glow,
Brain receiving signals from body indicating battery low.
People usually tell me Rome was not built in a single day,
But here grasping six month course in a night is the only way.
Leaving behind us in disguise gone had sleep for a walk in park,
Exhausted minds seeing night & wondering if future too is that dark.
Studying together to ensure no one studies extra even a single line,
Continuous cycle of study and coffee break till finally stuck by sunshine.
Books notes pdfs in surplus to travel with in this never ending night quest,
Hiding an ecstasy feeling inside, heart was cunningly smiling for the final test.
Recycled will be notes and books shall now be considered not as a friend,
Sarcastic resolutions of studying well for next exam shall come to an end.



Sagar raja 7th sem
Mechanical



THOSE MIGHTY RAINDROPS

I was looking down,
Everyone around me disappeared,
My lost hopes, lost spirits took me there.
My legs shivered and I was unable to hear,
I thought maybe it's the escape I need,
Maybe lame things cannot feed me,
As I took steps without caring where it led.
A spark of light suddenly shined,
My head turned up towards the sky
Dark clouds were covering the whole sky,
Was it again the same despair? I ask why,
My eyes searched for something,

My heart craved for something,
It was sun peeping by, along with the rain
Rain drops fell down making plant life happy,
Rain drops washed the gloom of the sky,
Rain drops made a way for the sun.
Thirst decreased, life eased.
Dark clouds gave a hope, Rain lent a helping hand.
Then why not I wet myself in shower of this magic wand,
I smiled because I am able to cope,
Mighty rain drops are all about hopes.



Sourashree Banerjee 3rd sem
Meta



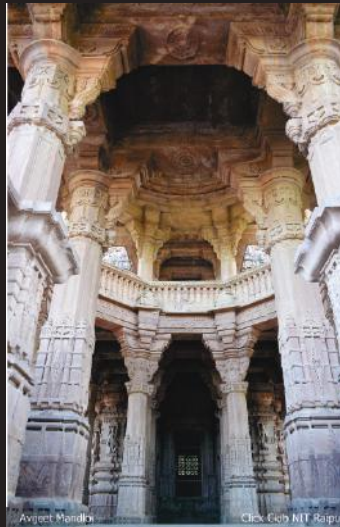
Sathvik P Chinnu Click Club NIT Raipur



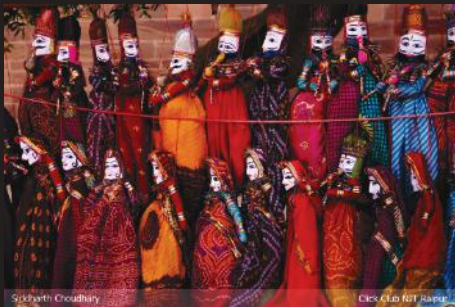
Anuruya Chandra Click Club NIT Raipur



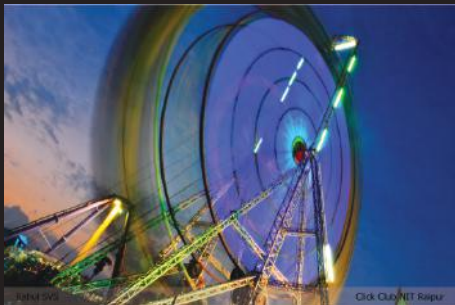
Siddhant Choudhary Click Club NIT Raipur



Avinash Mondal Click Club NIT Raipur



Siddhant Choudhary Click Club NIT Raipur



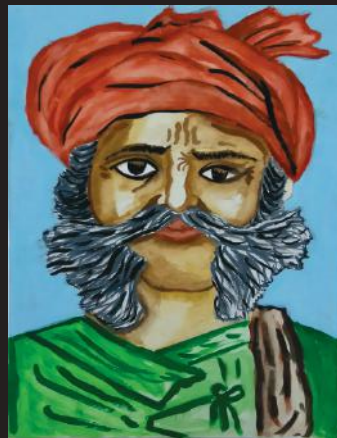
Jyoti Siro Click Club NIT Raipur



Rishabh Gupta Click Club NIT Raipur



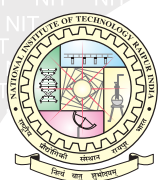
Rishabh Gupta Click Club NIT Raipur



Technical

*Lets go invent tomorrow
instead of worrying about what
happened yesterday.*

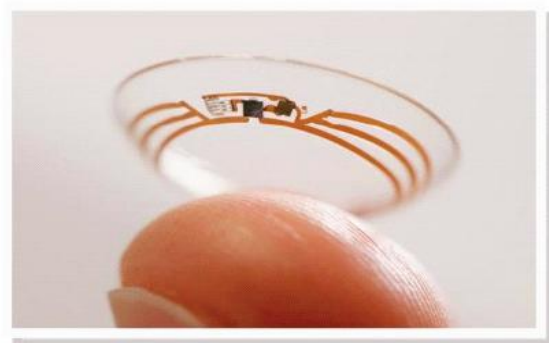
Steve Jobs



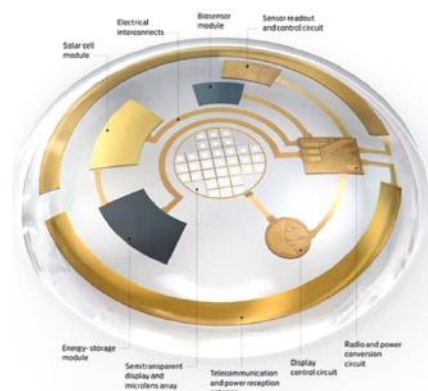
Want to be a Cyborg? Try these TECH-MED

innovations

There have been some truly amazing Med-tech developments this year, each sounding like they're right out of Science fiction (Fringe, anyone?!). Here's a few seriously worth talking about.



The Google Lens consists of a wireless chip and a miniaturized glucose sensor. A tiny pinhole in the lens allows for tear fluid to seep into the sensor to measure blood sugar levels. There is a wireless antenna inside of the contact that is thinner than a human's hair, which will act as a controller to communicate information to the wireless device.



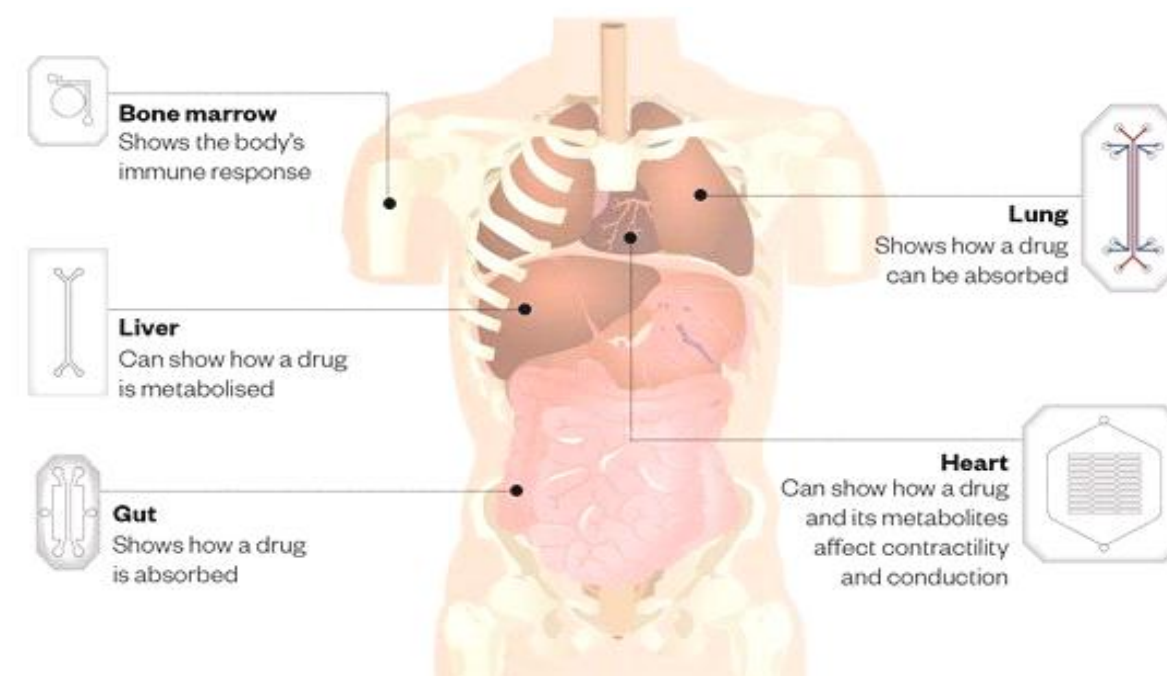
The Bionic Pancreas

Then there is the option of replacing the entire organ in Diabetes...A research team from the University of Cambridge (UK) has managed to develop a closed loop beta-cell based insulin

delivery system for diabetes type I. This bionic pancreas prototype has been constructed for human trials using an iPhone app which monitors blood glucose levels.



And Replacing Organs Altogether?

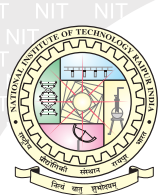


Organs-on-Chips have potential to maybe one day replace the need for animal testing in pre-clinical drug trials. These microchips are considered 'organs' because they contain perfused

chambers of living cells arranged so that they simulate living tissues and function at the organ level in their physiology.

So far, organs which have been replicated to the 3D

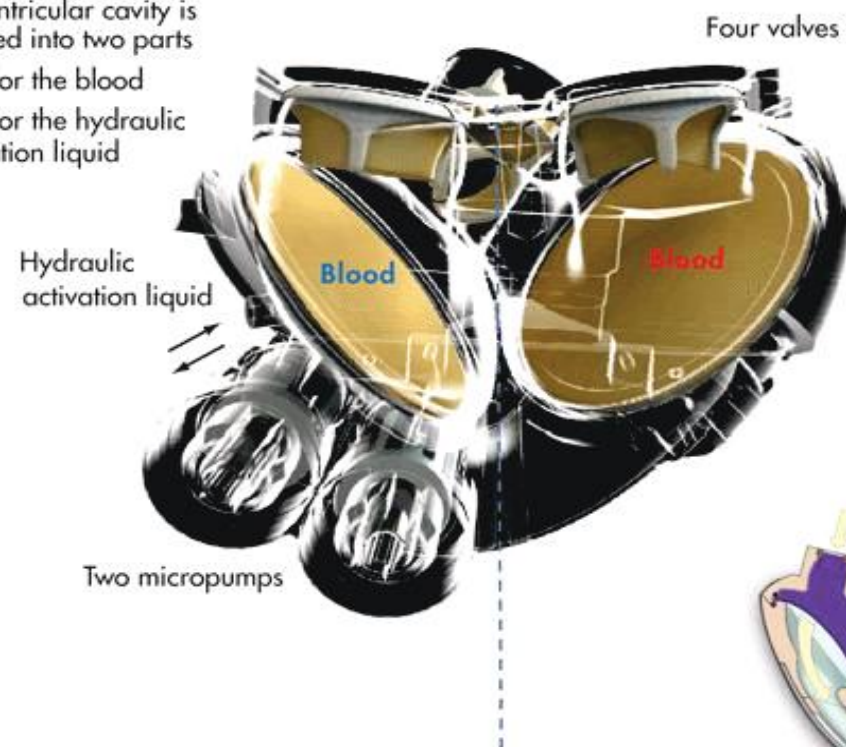
microchip level include the Heart, Liver, Lungs, Gut and also Bone Marrow, all made into micro fluidic cell culture-devices. Bionic!!



Starting With the Heart

Each ventricular cavity is separated into two parts

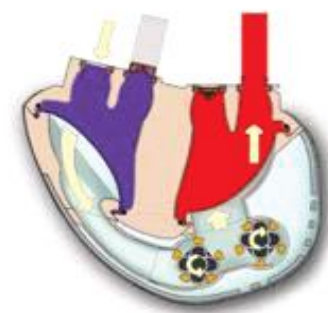
- One for the blood
- One for the hydraulic activation liquid



Four valves

Two hybrid membranes

- Bloodside: bovine pericardium
- Pump side: polyurethane
- Integrated ultrasound sensors

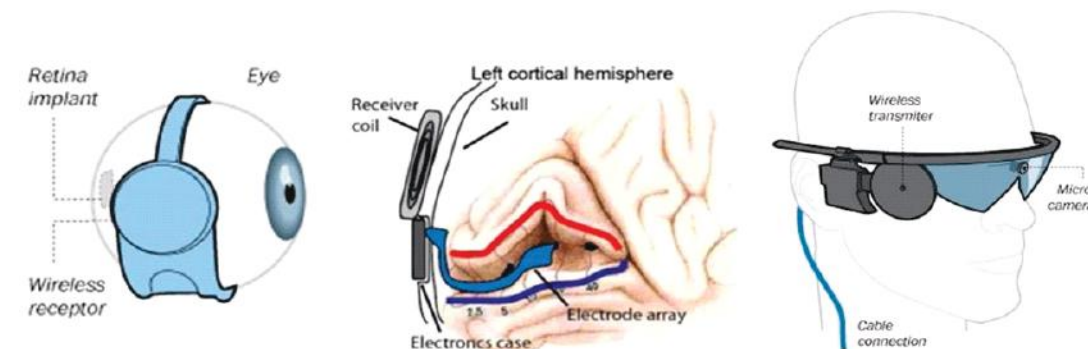


Carmat's Artificial Heart: The first artificial blood pump was invented more than 70 years ago, but for a long time major setbacks have included thromboembolism (clotting) and haemorrhage. One way Carpentier's group tackles

these difficulties is by using bio-prosthetic materials. It is the first heart using biological tissues which is also intelligent with blood pressure measures, to adapt the heart rate to the body's needs (simulating hypothalamic control!).

Costing approximately €150,000, it is a technological marvel, and so far a total of four patients have received the artificial heart in the latest feasibility study.

But Bionic Eyes? Surely Not

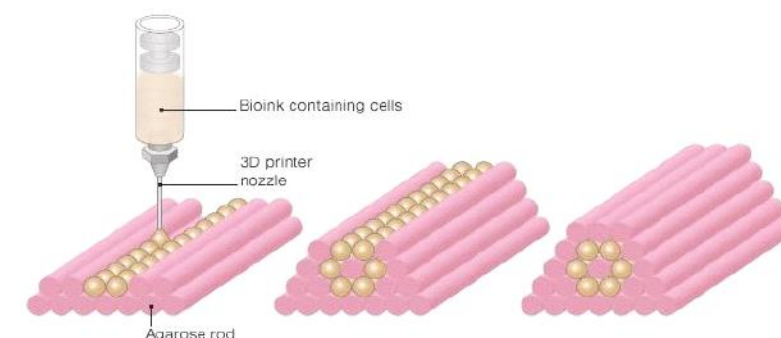


France's Pixium Vision has made The IRIS system which involves an intraocular implant that is surgically placed into the eye and attached to the surface of the retina. The patient wears

a pair of spectacles containing an integrated mini-camera and wireless transmitter. These glasses are connected to a pocket computer, which processes the image

captured by the camera into a signal that is transferred back through the glasses and projected onto the retinal implant to stimulate the optic nerve and generate images.

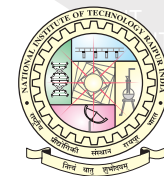
Smart Bone and Skin

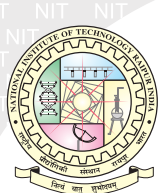


The biotech IBI in Switzerland has invented artificial bone substitute dubbed SmartBone, an innovative grafting material for bone reconstructive surgery. This mimics human bone, is strong and resistant

to shaping, screws and surgical fixation maneuvers. SmartBone is produced by combining natural mineral bone structures with bioactive polymers and cell nutrients – a new concept of biomaterial assembly. This

allows the patient's cells to grow quickly and efficiently into SmartBone while the artificial biopolymers degrade, therefore providing a perfect integration scaffold for bone regrowth.



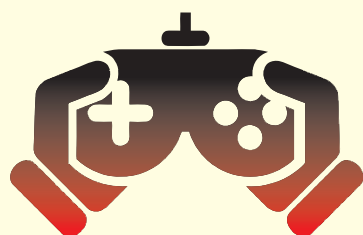


Finally when you become a Cyborg, throw your pendrives because you don't need one, when you have DNA

1 gram DNA = 1000000000 TB storage!!! In case you haven't counted number of zeroes it is One billion TB of data. Maybe one day, these DNA drives can replace your memory!! Who knows?



Amrendra Singh 3rd sem
Biotechnology



Analytics in VIDEO GAME INDUSTRY

Gone are the days of video game consoles such as PlayStation, Xbox or Nintendo as the new generation is all about smart phones and social media platforms. The humongous 90 billion dollars gaming industry has come a long way since the days of Pac-Man and Pong and is definitely here to stay.

Not just the multinationals like Electronic Arts (EA), Sony or Microsoft but thousands of new designers and developers

are into getting into the business of gaming. After all, the money it promises is a no small feat!

But with more people trying their luck in this business, the competition has become fierce, to an extent of the market becoming saturated. And with the increasing expectations of the people in terms of unique graphics and higher levels of game play, developers must really put up a fight to get their games

selling.

With gaming setting out a foot on social media platforms, the one thing that it has given these companies is- data and that too loads of it. As companies like Zynga have made their games like Zynga Poker, Words with friends and Farmville live on social media, it has brought in a lot of user connections. And this is where it comes as an interesting perspective as to how these companies can make use of this data to provide gamers with a compulsive, novel distraction to stay ahead of the competition!



Micro transactions and Macro data

Most of the games today are based on this principle. For instance, one of the most popular games Candy Crush Saga uses a business model known as 'freemium'. While the game can be played completely without spending money, players can buy special actions to help clear more difficult boards, adding more fun into the game.

Another game Farmville, which is a simulation for cultivating a farm, continually

offers the players in-game bonuses such as additional livestock, for seemingly small amounts of cash.

Big data also has a role to play in the designs of the games. Zynga's smartest insight of big data was to notice the significance of offering their users what they really want. For example, in the earlier versions, the animals used to be only in the background. But when the data revealed that they were very popular with

the gamers, they were given prominent roles in the latest versions of the game.

Though Zynga's position and credibility has been declined in the gaming industry recently, the way it used data could be termed as a good example of how big data could become a trend setter in the gaming industry. Using the big data concept, these games had become extremely popular and took the company to the top position in the gaming.



Virtual Reality

Virtual Reality is the latest trend in gaming world. There is a plan to launch VR Headsets soon by

Multinationals like Microsoft, Facebook and Sony. The way we interact with the data and explore it outside the

boundaries of gaming industry will get hugely impacted due to these VR Headsets.



Gaming industry- an opportunity for Data Scientists

For a good amount of time, gaming industry has generated more revenue than the movie industry. That itself is a testimony of the high potential this industry has. And given the amount of data it procures, it comes as a good opportunity for data scientists to explore.

A study by McKinsey Global Institute indicates that there is a shortage of talent who could have both data management and analytical

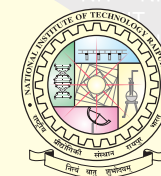
skills, leading to a high demand of data scientists in various fields. It also indicates that 1.5 million more managers and analysts are needed with expertise in data science. Being regarded as the best job for the year 2016, the average base salary for a data scientist is 3 times more than for a normal software engineer.

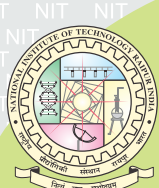
Given the stats and with the gaming industry witnessing a boom, it comes as a good place for data scientists to venture

into. So, taking training and gaining expertise in data science can create miracles to your careers as there are so many industries like Gaming who are offering jobs for data scientists and paying them huge salaries.



Amit Goswami 7th sem
Mining





Biodiesel –The future Fuel

Biodiesel is a renewable fuel produced from agricultural resources such as vegetable oils. In the India, most biodiesel is made from Jatropha plant seeds; however canola oil, sunflower oil, recycled cooking oils, and animal fats are also used.

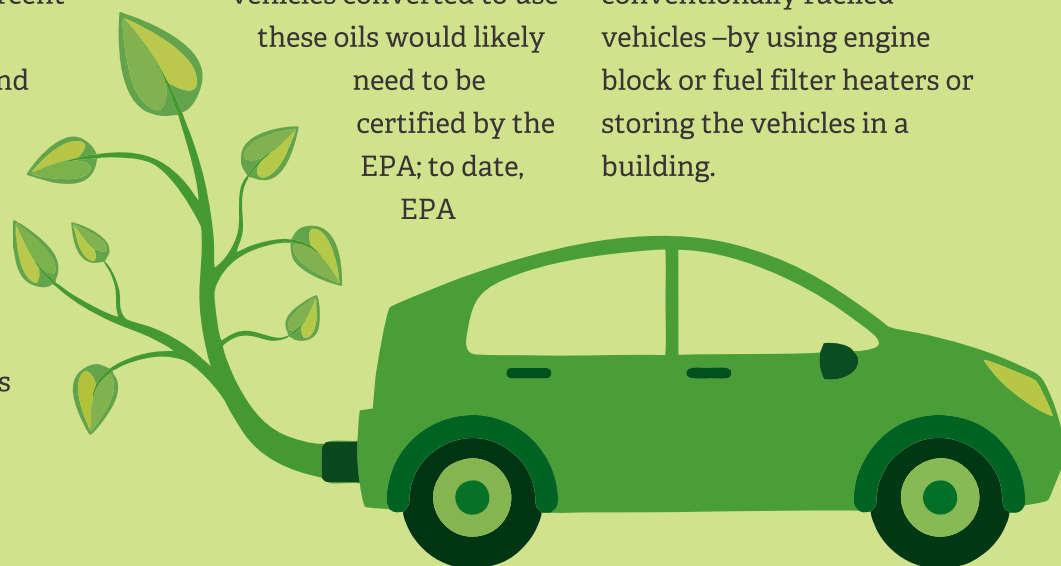
How it's Made: To make biodiesel, the base oil is put through a process called "esterification." This refining method uses an industrial alcohol (ethanol or methanol) and a catalyst (substance that enables a chemical reaction) to convert the oil into a fatty acid methyl-ester fuel (biodiesel). Biodiesel in its pure form is known as "neat biodiesel" or B100, but it can also be blended with conventional diesel, most commonly as B5 (5 percent biodiesel and 95 percent diesel) and B20 (20 percent biodiesel and 80 percent diesel). Biodiesel is registered with the Indian Environmental Protection Agency (EPA) and is legal for use at any

blend level in both highway and non road diesel vehicles. Most diesel engines can run on biodiesel without needing any special equipment or adjustment.

Biodiesel v/s Vegetable Oil: In 1895, Dr. Rudolf Diesel invented the diesel engine with the intention of running it on a variety of fuels, including vegetable oil. In fact, when he demonstrated his engine at the World Exhibition in Paris in 1900, he fuelled the vehicle with peanut oil. However, biodiesel and vegetable oil are very different. Raw vegetable oil or recycled greases (also called waste cooking oil) that have not been processed into esters are not biodiesel, and are not registered by EPA for legal use in vehicles. In addition, these oils would likely need to be certified by the EPA; to date, EPA

has not certified any conversions. These conversions may also violate the terms of the vehicle warranty.

Performance: Vehicles have similar horsepower and torque as conventional diesel when running on biodiesel. Chemically speaking, biodiesel has a higher cetane number, but slightly lower energy content than diesel. To the average driver, this means better engine performance and lubrication, but a small decrease in fuel economy (2-8 percent). Biodiesel vehicles can also have problems starting at very cold temperatures, but this is more of an issue for higher percentage blends such as B100 and easily solved the same way as with conventionally fuelled vehicles –by using engine block or fuel filter heaters or storing the vehicles in a building.



Affordability: The price of biodiesel blends varies depending on geographic area, base material (corn, soybeans, etc.), and supplier. Although biodiesel can cost more than petrol and diesel, drivers can transition to biodiesel without purchasing new vehicles. In the case of fleets, managers can transition to biodiesel without acquiring new spare parts inventories or rebuilding refuelling stations.

Maintenance: Generally, the use of biodiesel does not cause many maintenance issues. However, when used for the first time, biodiesel can release deposits accumulated on tank walls and pipes from previous diesel fuel, initially causing fuel filter clogs. As a result, vehicle owners should change the fuel filter after their first tank of biodiesel. Also, biodiesel can degrade rubber fuel system components, such as hoses and pump seals. This is especially true with higher-percentage blends, and older vehicles. Many newer vehicles

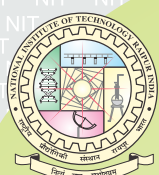
have biodiesel-compatible components, but it is best to consult your owner's manual or contact your vehicle manufacturers for specific information.

Benefits: Biodiesel has a number of important benefits. As an alternative to diesel, it can help reduce Indian dependence on foreign oil. Biodiesel also provides significant greenhouse gas (GHG) emission reductions. B100 reduces lifecycle greenhouse gas emissions by more than 50 percent, while B20 reduces GHG emissions by at least 10 percent. In addition, biodiesel offers several criteria emissions benefits for the existing vehicle fleet. It reduces emissions of carbon monoxide, particulate matter (PM), and sulfates, as well as hydrocarbon and air toxics emissions. A 2002 EPA summary analysis of existing data suggests vehicles using biodiesel

may emit slightly more nitrogen oxide (NOx) (about 2 percent for B20 and 10 percent for B100). Subsequent studies have yielded mixed results, with some showing small increases and others showing small decreases. EPA plans a further investigation to fully assess this issue, including the emissions impact of using biodiesel in vehicles equipped with PM traps and NOx after treatment designed to meet strict new emission standards.



Debasish Parida 5th sem
Chemical



Cricket

is Mathematics

Mathematics is a subject that is an essential part of almost every field, and also of our day to day life. Some people simply hate mathematics. While others just love it. And one of those species are engineers. Mathematics is the heart of engineering. It plays a vital role in almost every branch of engineering.

Also, there is a sport called cricket which is the most popular in India. Mathematics is also the heart of cricket. Cricket is simply nothing without it. And thus without much of an objection it is the most popular sport among the engineers. Whether one

plays cricket or not, everyone who loves mathematics has a special affinity towards cricket. It is simply a game of statistics. A team's score, the run-rate, a batsman's strike rate, a bowler's economy rate are some of the numbers on which the eyes of most people lie on during a live cricket game. Being a popular game among the engineers, it doesn't matter whether it is exam time or college time, almost everyone manages somehow to get to the edge of their seats with their fingers in their mouth watching the match with full enthusiasm. During a close match everyone is busy calculating the required run rate and predicting which particular team has a better chance to win.

With modernisation in technology a term called WASP was introduced in cricket. Winning and Score Predictor (WASP) is a calculation tool used in



cricket to predict scores and possible results of a limited overs match, e.g. One Day and Twenty 20 matches. The prediction is based upon factors like the ease of scoring on the day according to the pitch, weather and boundary size. The statistics

like runs conceded over wise are displayed on manhattans, the run rate throughout the match are displayed on graph, batsman's scoring areas are displayed on wagon wheel which are absolute delight for a maths lover. Pitch maps are shown depicting the percentage of deliveries a bowler bowls at a particular length.

The contribution of maths to cricket also comprises of the D/L method. The Duckworth–Lewis method (often written as D/L method) is a mathematical formulation designed to calculate the target score for the team batting second in limited overs match interrupted by weather or other circumstances. It is generally accepted to be the most accurate method of setting a target score.

The basic principle is that each team in a limited-overs match has two resources available with which to score runs: wickets



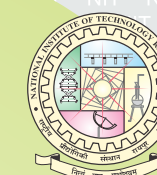
Harsh Raj Singh 5th sem

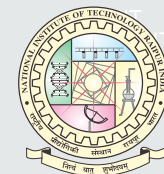
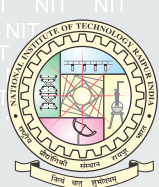
Electrical

remaining, and overs to play. Where overs are lost, setting an adjusted target for the team batting second is not as simple as reducing the run target proportionally to the loss in overs, because a team with ten wickets in hand and 25 overs to bat can be expected to play more aggressively than if they had ten wickets and a full 50 overs, for example, and can consequently achieve a higher run rate. The Duckworth–Lewis method is an attempt to set a statistically fair target for the second team's innings, based on the score achieved by the first team, taking their wickets lost and overs played into account.

Maths is a basis for great cricketers setting milestones on the basis of highest number of runs, highest average for a batsman or a bowler, highest strike-rates, most number of wickets taken, most centuries scored etc. It helps in analysing which particular player is better than others on the basis of which the rankings of players and teams are decided.

Maths has brought revolution in technology and modernisation of cricket. Maths is surely a cricketer's favourite subject and Cricket is surely a mathematician's favourite game.





Let's debunk the myth INTERNSHIP

Usually there are 2 types of internship for students :-

- 1) Summer Research Internship
- 2) Summer Internship with a company/startup

Different sources present over the internet provide the idea that a student should go for summer research internship in his 2nd year and then a summer internship with a company/start-up in his 3rd year. The given idea is generic in nature. The type of internship that a student should opt depends entirely on interest of student. A student may go for summer research internship for both years if he/she wants to pursue higher studies or go for summer internship with startup/company if he/she may want to enter the corporate sector. Now-a-days students are opting to go for summer internship

from 1st year itself. This is because the competition is increasing exponentially and each student wants to gain an upper hand over other.

Therefore every student should follow this pattern during their college life to make sure they are ready for life after college.

- 1) "Summer Internship with a company/startup"
- 2) "Summer Internship with a company/startup" or "Summer Research Internship"
- 3) "Summer Internship with a company/startup" or "Summer Research Internship"

Now a major question arises that "How to get selected for an internship?" I am going to

share the excerpts that may help you get selected for an internship. These have helped me and my batch mates get selected for internship and may or may not prove beneficial for the reader. The excerpts are :-

1) Make a resume. It is the most important part of getting selected for an internship. A resume usually provides the first impression to the hiring personnel and may prove deciding factor for you to get an internship

or to advance to the interview round. There are many sources available in the internet which will tell you how to make a resume. Many companies have their own formats.

2) Before applying for internship the students should make some of their own projects and not just add them to their resume they should also make them available for others to see. Therefore having a Github Profile is important. It can help hiring personnel to judge you better and it increases your visibility over the profile of many thousands.

3) As a Facebook profile is important for social connections, A LinkedIn profile is more important to increase your professional visibility and professional

connections. It helps the reader to garner important information related to corporate sectors.

4) A person should have proper E-Mail ID such xyz.abc@xxx.com . A proper email ID gives a better impression of your professionalism.

5) Although a person might think that he/she is fit for a company but in reality their resume may not get picked up. To make sure it is picked up from the pile of resumes you need to search for contact in that company/startup or Institute.

6) Perseverance is the quality every person should

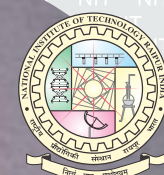
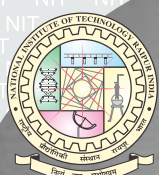
possess. The ratio of acceptance is 60:1 generally. Therefore to give up even before getting a reply back from any company or institute is not recommended. Instead one should not stop looking for internship even if one is selected in a company or organization. They should always try to look for better opportunity.

7) There are roughly 1000+ professors in India. You are among the top percentile of students in India. A professor has to reply you back. Search for the relevant professor and mail them. Remind them after each week unless you hear a positive or negative reply from them.



Devesh Krishnani 7th sem

IT



Crafted For Creativity

Did you ever feel how incredible it would be if there is something that can make your 2D scribbles into 3D? If yes, stop feeling incredible! Because it's already a reality!!

Technology gave birth to a small and smart 3D pen which creates rigid and free standing structures. The device is fashioned from Aluminium and is 6.45inch. long with a diameter of 0.55inch. Straight ABS or PLA plastic rods of 0.068inch diameter and 10inch long are fed into the top of the pen, near the power port. It then makes its way through to a heated nozzle at the other end. Flow is controlled by buttons on the lower part of the housing. There is also an LED heat indicator near the power socket. This is powered by using a 49 inch cable that plugs into any USB cable.

Acrylonitrile Butadiene Styrene (ABS) is a common

thermoplastic polymer which has greater strength



flexibility, malleability and higher temperature resistance. It melts at 356F and works at 446F.

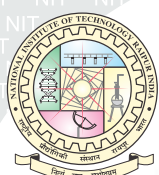
Poly Lactic Acid (PLA) is a biodegradable thermoplastic aliphatic polyester derived from renewable resources. It comes in a wide range of colours and levels of attractive glossy translucency. It has slightly less strength and flexibility than ABS and is also sensitive to moisture. It begins to melt at 320F and works at 356F.

Fortunately, using this 3D pen is not too difficult. Plug in the power cable. Charging time is less than a minute. You can get to know the level of heating by the LED. After reaching the right heat, melted plastic emerges from the nozzle and quickly cools down so that you can get started creating great things.

This blend of beautiful engineering and meticulous craft has become a major breakthrough for stylists, architects and designers creating a quantum leap in 3D technology.



B Salome 3rd sem
Electrical



"WIN LIKE AN ENTREPRENEUR"

As an entrepreneur your first target must be to 'THINK BIG'. While there's no limit to 'thinking big', there are other aspects that you need to keep in mind before taking the final decision.

INVOLVE MAXIMUM PEOPLE

A person can only do X number of things in 24 hours, so your model of doing everything by yourself is not scalable and will eventually lead you to a chaotic situation. So delegate everything, every little to a large task. To make music, you need 5 people doing 5 different things. A music director can't make music all by himself.

DARE TO FAIL

Having a bad plan is always better than having no plan at all. The trick is not to go

for the plan or the idea you have blindly. But do not get into the trap of over-analyzing. Advice from mentors and well-wishers is okay, but after a certain point, if you want to think like an entrepreneur, you need to take some risks. Calculated risk is risk nevertheless. Go for it.

SAY HELLO TO THE NEW AGE-WORK CULTURE

Gone are the days where 'going to work' meant 'going to office'; now-a-days people work remotely from multiple locations, the freedom to work from home, means you just need to get the work done. A relaxed environment that breaks down your anxiety and tiredness also encourages creativity and happiness among your team members.

ALWAYS HIRE THE RIGHT PEOPLE AND LET THE BAD ONES GO

Always aim at hiring the right people than hiring

large number of people. One good hire can be 100x productive than your one bad hire. If you won't let the wrong ones go, you'll end up in mismanagement as their outcome will never be up to your expectation. In the end, you'll have a hard time in cleaning up the mess your low-cost average employees made.

LOVE YOUR TARGET AUDIENCE, PRODUCT COMES NEXT

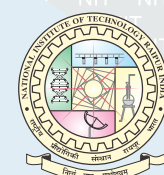
It doesn't matter if you've spent 5 years in building the next big thing. If your target audience thinks otherwise, it's time to innovate your product. Obsessing over your product without understanding the demand of the user is a costly mistake. So, take small steps, get user feedback, analyze, make it better, and WIN!

So, are you ready to make a dent in the universe?



Suyash Gupta 3rd sem

IT



BREXIT

WHAT'S ALL THE FUSS?

What actually is BREXIT? Britain exiting European Economic Area Countries (EEA) is shortened as BREXIT (a portmanteau of "British" or "Britain" and "Exit"). On June 23, 2016, a referendum was held on the country's membership of the European Economic Community (EEC), now known as the EU. The result of this referendum was 51.9% in support of an exit (17,410,742 votes) and 48.1% (16,141,241 votes) to remain with a turnout of 72.2% and 26,033 rejected ballots. The referendum roiled global markets, including currencies, causing the British pound to fall to its lowest level in decades. Prime Minister David Cameron, who supported the UK remaining in the EU announced he would step down in October.

European Economic Area is a group of 30 European countries. All these countries have made certain

trading rules and regulations in terms of Exports and Imports for mutual benefit. The member countries should follow these trading rules as per the agreement. UK had been in EEA for 43 years and Economically benefited more than any other European country. UK Exports 43% of goods and services to EEA countries and imports only 18%, ideally UK is in surplus. Service sector of UK contributes highest to its GDP, while contribution of manufacturing sector is almost negligible.

Why BREXIT?

Supporters of BREXIT had based their opinion on a variety of factors, from the global competitiveness of British businesses to concerns about immigration. Primary reason is, UK is not free to make trade rules of its own, EEA trade rules should be followed. Exports of UK to EEA countries is

dropping from last 10 years. There is a down trend in Manufacturing Sector in U.K. So, U.K. wants to enter in to Bilateral agreement with Rest of the World countries and boost its manufacturing sector. Euro Crisis, this is major impact in Euro Zone, as per the terms and conditions made by EEA countries, U.K. is supporting Euro 10 Billion, so U.K. wants to use this amount to restructure the sectors effected due to BREXIT instead of spending to EEA countries. Britain has already opted out of the EU's monetary union (meaning that it uses the pound instead of the euro).

Is it GOOD or Bad?

Whether BREXIT will be good or bad depends entirely on:

1. whether you're British or not;
2. whether you live in Britain or not; and
3. your point of view.



If you are British, this depends on your point of view and what type of country you want to be part of in the future. There are both good and bad arguments for staying in the EU or for leaving.

Impact on U.K.

As per agreement, a 2 year time period is given to U.K. to re-think on its decision of exiting the EEA. During these 2 years there will huge hurdles for U.K. exporters till they form their own rules. This will have major impact on U.K.'s economy for short term. Other EEA countries might tighten the trade agreements with U.K. by increasing tariffs, and other policies. This can affect U.K.'s service sector until they make favourable Bilateral trade agreements with other countries.

Immigration, many working labourers come to U.K. from other European countries for employment. Because of

favourable deals with EEA, U.K. benefited till date in terms of low wage rate, this actually made U.K. to control inflation and lower interest rates. In case, if it exits, chances of inflation are high depending on immigration policies.

Impact on India

U.K. is comfortable route to other countries like India and USA to do trade with other European countries, so many countries including India did huge investments in England for their trading activities with EEA countries. More than 800 companies like, HCLTECH, INFY, WIPRO, TCS, Bharti Airtel, Emcure Pharma, Apollo Tyres and Wockhardt, invested and are doing business, definitely there will be impact on

revenue of these companies.

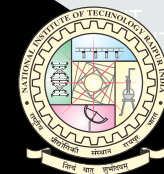
The fear due to exit can impact the market badly. In the short run, it could trigger flight of capital from Britain, which could strengthen the dollar. A strong dollar would push the rupee towards 70 level. Exports from India will be affected because of weak EURO. Capital outflow is also expected.

Overall, most analysts expect economic recession, not of the scale of the last financial crisis of 2008, but the impact will be felt all around the world, especially in Europe. Still, these are just predictions - we can only wait and see what is to come.



Rewa Shukla 3rd sem

IT



Mining on Moon

Space mining - A giant leap in 2016



Most of us see the moon as just a small circle in the sky. Naveen Jain, co-founder and chairman of space-mining startup Moon Express, sees quadrillions of dollars worth of valuable minerals, more than a million tonnes of fusion fuel and some prime business estate -- and he wants to own it. "So many resources which are extremely rare on Earth are abundant on the Moon," Jain says. "We shouldn't only be mining the Earth, we should be thinking of the Moon as our eighth continent."

Last December, Moon Express became the first private company to successfully build and test a Moon-capable robotic lander named MX-1, here on Earth.

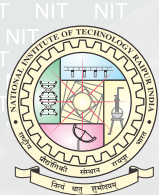
By 2016, it plans to land on the Moon itself in a bid to claim the \$20 million (£13m) Google Lunar XPRIZE for the first private lander to successfully travel 500 metres along the surface and transmit high-definition imagery back home. In October, in partnership with NASA, it was on track to launch a shuttle to retrieve experiments from the International Space Station. "On return it will land with ten-metre accuracy," Jain says. "You could land it in your backyard."

The future of online retail is collaboration

Cargo such as helium-3 is an ideal candidate fuel for nuclear fusion. Formed in the sun and carried through

space on solar winds, helium-3 is extremely rare on Earth, thanks to the protection of the planet's magnetic field. The Moon, however, has no such shield and is estimated to have absorbed enough helium-3 to meet global energy demand for more than a millennium. "We know it's there in tremendous quantities, from all the surveys and lunar meteorite analyses of the past 50 years," Jain says. "Even a relatively small quantity could power this planet for generations."

Others are already looking afield. Virginia-based Deep Space Industries and Washington-based Planetary Resources have



both set their sights on near-Earth asteroids, the original source of much of the Earth and Moon's precious metals. "Space travel isn't about distance," explains Planetary Resources' president and chief engineer, Chris Lewicki, who was also former flight director for NASA's twin Mars Rover missions. "Everything is measured in terms of the amount of rocket fuel that you need. Asteroids have no gravity, so going there and bringing stuff back requires as little fuel as docking with a space station. There are almost 4,000 asteroids that we know of which are energetically closer to us than the surface of the Moon."

In June 2013, Planetary Resources, whose investors include Google's co-founder and CEO Larry Page and Virgin Group founder Richard Branson, launched a Kick starter, raising \$1.5m towards the funding of their first asteroid-prospecting craft. The 22cm ARKYD optical telescope is set for launch into Earth orbit by the end of 2016. Because asteroids are mostly the

same material throughout, analysis of ARKYD imagery will give the company indication of which ones would be candidates for mining, Lewicki explains. "We can use optical spectra and the light reflected off these asteroids to tell the difference between metallic asteroids, carbonaceous asteroids with water and those that are just boring rocks."

As with the Moon, a major draw to asteroid mining is the abundance of rare Earth metals found throughout space -- in particular, the platinum group, used not only in jewellery but in the manufacture of everything from catalytic converters and smartphones to cancer treatments. Access to an abundance of these, Lewicki suggests, could have a similar impact on technological development as the discovery of how to extract aluminium from the Earth's crust. Yet the high value of the most important in-space resources comes not from their rarity on Earth, but from their presence off it, specifically outside of the planet's

gravitational field. "The first resource we're interested in is plain old water," explains Lewicki. "At the moment it costs us about £60 million per tonne just to get it out there." On the Moon, she says, water will provide the oxygen needed to begin the expansion of human habitation into space. It's presence throughout the universe will essentially fuel its exploration. "H₂O contains the elements of the same rocket fuel that powered all 135 space shuttle launches," explains Lewicki. "By capturing water from asteroids and bringing it back to Earth orbit, we'll be able to refuel all abandoned satellites in space. And we can serve as refuelling stations around the solar system for wherever human beings want to take their activities."

Not only fuel stations, but factories. Iron, nickel and cobalt, the base metals needed for spacecraft manufacture, are also abundant throughout space, where zero or low gravity will allow for the creation of entirely new chemical compounds and alloys that

would be impossible under the Earth's pull. "There are pharmaceutical drugs, for example, that could only be developed in space and the chemicals will crystallise very differently in something like moon's gravity." Jain elucidates.

Future spacecraft, 3D-printed with in-space resources will never need to undergo the violent forces needed to escape planetary gravity, allowing for constructions of currently inconceivable size and delicacy. "This is going to create the spacecraft

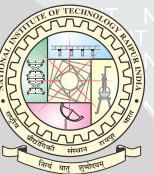
envisioned by science fiction," Lewicki says. "Engineers will be working with an entirely different set of constraints than they have today."

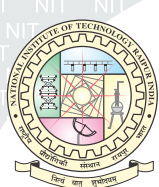
Given that humanity first landed on the moon 47 years ago, why is the exploitation of space's bountiful resources only just getting started? The answer, according to Jain, comes down to increasingly powerful off-the-shelf technologies, making space a much more appealing investment proposition to private enterprise. "Four

years ago, the LiDAR used to measure our location and descent would have cost us \$1.5 million; three months ago we bought it for \$1,500. Space-certified cameras used to cost hundreds of thousands. We're using modified GoPros," he says. "Earlier missions to the moon cost billions of dollars. Now we can do that for \$50 million, and costs will continue to come down."



Dinkar Tiwari 7th sem
Mining





Energy in future

Seeing the present scenario we can't predict from where we shall get energy in future. What do you think? Maybe not from conventional sources. Considering the present scenario, non-conventional resources will be the best options as we only have to harness the energy from nature and I think this is one of the most important step.

The most abundant form of energy present on earth is obviously solar energy. It is available everywhere on the earth in quantities that vary only modestly. The role of solar energy is indeed going to be predominant. Because solar energy is available free at any place on the earth. Solar energy is renewable and will not deplete within the next several billion years. There are many techniques presently available to

harness the energy from sun but the efficiency is very less. The world record maximum achieved efficiency is 47.6%. Normally the efficiency is less than 30%. From here we can focus only towards increasing the efficiency of solar panels.

The most advance upcoming projects towards this aspect is SOLAR TRACKING SYSTEM. A system in which the solar panel will move in the direction of sun, by tracking the sun's position. It will remain at the angle where the intensity of light is maximum. This will increase the efficiency upto 80%. Once we achieved this efficiency our future may secure from energy crises.

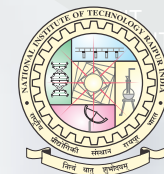
The second project is towards the storage of solar energy, which is also one of the major

problem regarding this. The normal batteries cannot be used to store the tremendous energy. A fuel cell convert the chemical energy in small organic molecules like methanol into electricity. We recently working on fuel cell that also runs in reverse—essentially converting energy back into chemical reactants—the resulting flow battery could store solar power using inexpensive, organic fuel.

Other methods of storing solar power for a rainy day involve converting the sun's energy into heat, which is then captured in thermal storage tanks and store excess energy in molten salt, which can absorb extremely high temperatures without changing state.



Rahul Prajapati 5th sem
Electrical

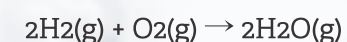


HYDROGEN: FUEL OF THE FUTURE

"The first car driven by a child born today could be powered by hydrogen and pollution-free," declared former US president George W. Bush in 2003, as he announced a US\$1.2-billion hydrogen-fuel initiative to develop commercial fuel-cell vehicles by 2020.

Hydrogen is the simplest element. An atom of hydrogen consists of only one proton and one electron. It's also the most plentiful element in the universe. Since hydrogen gas is so light, it rises in the atmosphere and is therefore rarely found in its pure form, H₂. It always combined with other elements. For example, is a combination of hydrogen and oxygen (H₂O)

Hydrogen fuel is a zero-emission fuel when burned with oxygen. It often uses electrochemical cells or combustion in internal engines. In a flame of pure hydrogen gas, burning in air, the hydrogen (H₂) reacts with oxygen (O₂) to form water (H₂O) and releases energy.



Production of hydrogen always requires more energy than can be retrieved from the gas as a fuel later on. This is a limitation of the physical law of the conservation of energy. Most Hydrogen production induces environmental impacts. The heat in a hydrogen flame is a radiant emission from the newly formed water molecules. The water molecules are in an excited state on initial formation and then transition to a ground state; the transition unleashing thermal radiation.

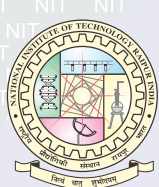
PRODUCTION

There are different ways to produce it, such as electrolysis and steam-methane reforming process. In electrolysis, electricity is run through water to separate the hydrogen and oxygen atoms. This method is much more energy intensive. Obtaining hydrogen from this process is being studied as a viable way to produce it domestically at a low cost. Steam-methane

reforming, the current leading technology for producing hydrogen in large quantities extracts the hydrogen from methane. However, this reaction causes a side production of carbon dioxide and carbon monoxide, which are greenhouse gases and contribute to global warming. Once hydrogen is extracted, the energy can be delivered to fuel cells and generate electricity and heat, or burned to run a combustion engine.

THE FUEL CELL

Fuel cells can operate at higher efficiencies than combustion engines, and can convert the chemical energy in the fuel to electrical energy with efficiencies of up to 60%. Fuel cells have lower emissions than combustion engines. Hydrogen fuel cells emit only water, so there are no carbon dioxide emissions and no air pollutants that create smog and cause health problems at the point of operation. Also, fuel cells are quiet during operation as they have fewer moving parts.



DO YOU KNOW?

- Hydrogen fuel cells power the shuttle's electrical systems, producing a clean byproduct - pure water, which the crew drinks.
- Some algae and bacteria, using sunlight as their energy source, even give off hydrogen under certain conditions.
- 1 kilo of hydrogen is roughly equal to 1 gallon of gasoline.
- The Toyota Mirai can power the average house for about a week from the 5 kilos of hydrogen in its twin tanks.
- A “Hydrogen Highway” is being built in the northeast corridor: 12 strategically selected locations in New York, New Jersey, Massachusetts, Connecticut and Rhode Island.
- The onboard hydrogen tanks are made of ultra strong fibers woven using a loom similar to the looms Toyota Corp manufactured in 1926.The tanks are bulletproof. Large

caliber rounds were fired at the fully pressurized tanks to test their integrity in an accident. The only bullet that was able to pierce a tank was a 50 caliber round—and only after hitting the exact same spot twice.Toyota hired former military snipers to fire those bullets.

CURRENT USES

- NASA has used liquid hydrogen since the 1970s to propel the space shuttle and other rockets into orbit.
- A fuel cell vehicle is a vehicle that uses a fuel cell to power an electric drive system. There are also hybrid vehicles meaning that they are fitted with a fuel cell and a battery or a fuel cell and an ultra capacitor.
- Fuel cell Cars –
- Hydrogen internal combustion engine vehicles- A hydrogen internal combustion engine vehicle (HICEV) is a vehicle powered by a hydrogen-

fueled internal combustion engine.

BMW:

- 2002 – BMW 750hl
- 2007 – Hydrogen 7 is powered by a dual-fuel internal combustion engine-liquid hydrogen
- 2007 – BMW H2R speed record car – ICE-liquid hydrogen

Ford:

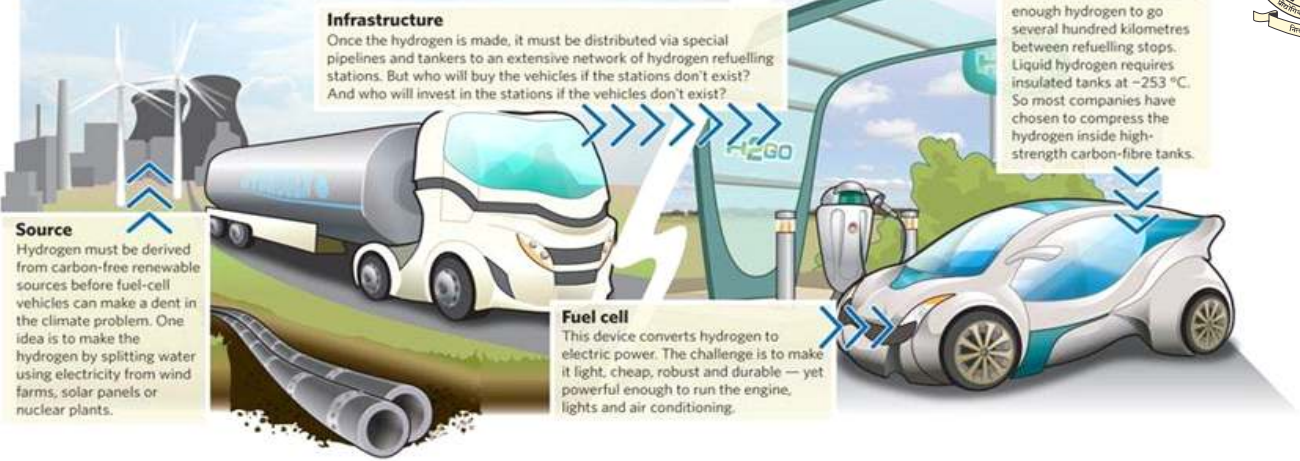
- 2006 – F-250 Super Chief a "Tri-Flex" engine concept pickup
- 2006 – Ford E-450 H2ICE Shuttle Bus a 12 passenger shuttle bus with a supercharged V10 fueled by compressed hydrogen

Mazda:

- 1991 – Mazda HR-X hydrogen Wankel rotary
- 1993 – Mazda HR-X2 hydrogen Wankel rotary
- 1993 – Mazda MX-5 Miata hydrogen Wankel rotary

THE HYDROGEN CHALLENGE

The future of hydrogen fuel-cell vehicles depends on advances in four key areas: the hydrogen source, the distribution infrastructure, the on-board fuel tank and the on-board fuel cell.



- 1995 – Mazda Capella Cargo, first public street test of the hydrogen Wankel rotary engine
- 2003 – Mazda RX-8 Hydrogen RE hydrogen-gasoline hybrid Wankel rotary
- 2007 – Premacy Hydrogen RE Hybrid

CHALLENGES TO A HYDROGEN ECONOMY

A hydrogen economy faces many technical challenges and high startup costs mainly focused on infrastructure and storage. To make hydrogen vehicles practical, hydrogen fueling stations must be constructed and strategically located along roadways and in urban centers. According to Royal Dutch Shell setting up a functioning network of hydrogen filling stations will cost \$20 billion for the U.S. and Europe, and \$6 billion for Japan. Despite these costs, Shell believes strongly in the future of the technology and has quickly established itself, in

partnership with General Motors , as a leading innovator and advocate of the hydrogen economy. The cost of the fuel stacks used in hydrogen production and consumption remains too high to be economically competitive with fossil fuel engines. This high cost is due to the precious metals required for reaction catalysts. Hydrogen fuel also remains too expensive. Much of the current cost of hydrogen is associated with transportation and storage (including in the vehicle). Scientists are, however, developing safer and more efficient methods to store hydrogen using metal hydrides, compressed storage, liquid storage, and carbon nanostructure storage. Toyota invested US\$2 million in a joint project with the Savannah River National Laboratory to research less costly solutions to hydrogen storage.

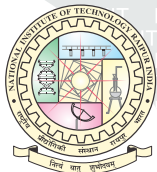
CONCLUSIONS

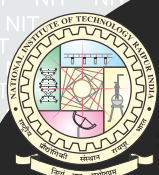
Although hydrogen has gained significant support over the past decade, there are still many uncertainties about its widespread future and even about its potential side effects— environmental and otherwise—if utilized on a massive scale. Currently, natural gas is commonly used as a source from which to isolate hydrogen ions, meaning that unless alternative sources of energy are used, we will remain dependent on non-renewable hydrocarbons—though in a less polluting and more efficient way. The bottom line is that the hydrogen economy is highly unlikely to replace oil in the next twenty years, though its presence as an alternative fuel will continue to grow.



Himanchal Singh 5th sem

Mechanical





INSIGHT INTO SPACE

•Curiosity has played an essential role in the advancement of the human species. From the discovery of fire by ancient ancestors to modern space explorations, it has been inquisitiveness and the pursuit for a better future that has made humanity explore and innovate. Mankind has progressed from the primitive innovations of building fire and wielding stone-age tools to the achievements of industrialization and globalization. In our increasing world of interconnectivity, population explosion, and technological and scientific discoveries, how do we manage the accompanying challenges that threaten our existence? Research suggests that space exploration and colonization is of vital importance to mankind, because our planet has a finite resource base for the support of the future population, we are at an increased risk of mass extinction. Space research and cosmic expeditions promote

innovation to stimulate growth and technological advancement.

•Space research is scientific studies carried out using technical equipment in outer space. It includes the use of space technology for a wide range of research disciplines, including Earth science, materials science, biology, medicine, and physics. The term includes scientific objects everywhere, from deep space to low Earth orbit, and is frequently defined to include research in the upper atmosphere using rockets, satellites and high-altitude balloons.

•The first step into space for the exploration of outer space was taken on 4th October 1957 when the erstwhile Soviet Union successfully launched the first man-made satellite "Sputnik-I" into space. This first satellite weighed about 84 kilograms. Sputnik-I satellite had an orbit with an apogee of 941 kilometers and perigee of 227 kilometers. Sputnik-I was

launched to carry out studies as a part of the International Geographical Year. The United States of America (USA) also followed the Soviet Union and launched their first spacecraft called "Explorer" after a few months which weighed only a few kilograms. Since then space technology has made very rapid progress. The satellites or other space-probes (called "payloads") have grown many times in size and weight and their functions have become more and more complex and diverse.

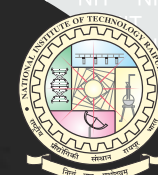
•Today, space technology has allowed India to move into the world of high technology, a place previously occupied only by more-developed nations. In recent years, India has concentrated much of its space development work on complex applications satellites and more powerful rockets. The nation's two main interests are satellites for remote sensing

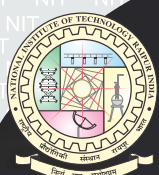
and communications -- used for weather pictures, disaster warnings and feeds to 552 television and 164 radio stations on the ground. The Indian scientists designed their first satellite at Bangalore with the assistance of Soviet scientists. It was named Aryabhata and was launched into orbit on the 19th April, 1975. It was named after the great Indian astronomer and mathematician of the fifth century. The 360 kilogram satellite began orbiting the earth at an altitude of about 600kms after it was launched by Soviet Intercosmos rocket. Its launching marked a significant event in India's advancement towards space technology and self-reliance. This historic event placed India at eleventh position among the nations of the world, who have successfully orbited their satellite, namely USSR, USA, Britain, Canada, Australia, Japan, Italy, West Germany, France and China. So sending of Aryabhata into orbit earned a place of prestige for India in the world community, and at the same time it also demonstrated the capabilities of Indian scientists.

History of space activities in India reached its first milestone in 1962 when Pandit Jawaharlal Nehru along with scientist Vikram Sarabhai established the Indian National Committee for Space Research (INCOSPAR). Following the establishment of the INCOSPAR, the first rocket launch from India took place in November 1963. The ICONOSPAR grew to become the Indian Space Research Organization (ISRO) in 1969. With the establishment of the ISRO and further with the government of India forming the Space Commission for policy formulation and the Department of space, research and execution of space related enterprises got a boost that it never had before. One of the recent achievements of India include the Mars Orbiter Mission (MOM), also called Mangalyaan. It is a space probe orbiting Mars since 24 September 2014 and was launched on 5 November 2013 by ISRO. It is India's first interplanetary mission and ISRO has become the fourth space agency to reach Mars, after the Soviet space program, NASA, and the European Space Agency. It is the first Asian nation to reach Mars orbit, and the first

nation in the world to do so in its first attempt.

In today's time, satellites are launched into the orbit by multi-staged satellite launch vehicles that can be used only once. These launch vehicles carry oxidizer along with the fuel for combustion to produce thrust. Such launch vehicles designed for one time use are expensive and their efficiency is low because they can carry only 2-4% of their lift-off mass to orbit. This has given rise to the necessity of a cheaper and more effective form of launch vehicle. The next generation launch vehicles must use a propulsion system which can utilize the atmospheric oxygen during their flight through the atmosphere which will considerably reduce the total propellant required to place a satellite in orbit. Scramjet engine is one such technique that can help the vehicle consume the atmospheric oxygen while ignition of fuel. A Scramjet is a form of air-breathing jet engine that operates on hypersonic speeds and uses the vehicle's forward motion to compress incoming air for combustion without a rotating





compressor. Fuel is injected in the combustion chamber where it mixes with the hot compressed air and ignites. This first experimental mission of ISRO's Scramjet Engine towards the realization of an Air Breathing Propulsion System was successfully conducted from Satish Dhawan Space Centre, Sriharikota.

In an infinite universe, most scientists agree, the odds of life existing on a planet besides Earth are pretty high. The possibility of finding an Earth like planet is of particular interest to humans under reasoning that the more similar a planet is to Earth, the more likely it is of sustaining complex extraterrestrial life. As such, it has long been speculated and the subject expressed in science, philosophy, science fiction and popular culture. Researchers have confirmed the existence of a rocky planet named Proxima B orbiting Proxima

Centauri, the closest star to our sun, according to a new study. It is the closest exoplanet to us in the universe. Given the fact that Proxima B is within the habitable zone of its star, meaning liquid water could exist on the surface, it may also be the closest possible home for life outside of our solar system, the researchers said. Advocates of space colonization have long sought an Earth like planet as a "second home", while advocates for space and survival would regard such a planet as a potential "new home" for mankind.

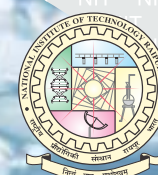
Humanity's interest in cosmos has been universal and persistent. We are driven to explore the unknown, discover new worlds, and push the boundaries of our scientific and technical limits. The desire to explore and challenge the boundaries of what we know and where we come from has provided benefits to our society for centuries.

Space research and exploration helps to address fundamental questions about our place in the Universe and the history of our solar system. The benefits of space exploration are many. Through addressing the challenges related to human space exploration we expand technology, create new industries, and help to forge a peaceful connection with other nations.

There also are benefits that maybe we cannot anticipate ahead of time. The Search for Extraterrestrial Intelligence (SETI) is a network that advocates looking for life around the universe, likely because communicating with beings outside of Earth could bring us some benefit. And perhaps there is another space-related discovery just around the corner that will change our lives drastically.



The TechnoCracy
AAVARTAN'16 : INSIGHT INTO SPACE



Water Chemistry and Treatment

Water is a natural solvent. Rain water is acidic due to carbon dioxide picked up in the atmosphere. Water and CO₂ make carbonic acid (acid rain). Water hardness is primarily calcium and magnesium. Calcium is limestone - common throughout Midwest. Acid water dissolves limestone, iron, and other minerals in soil. All pure water has an affinity for metals. Surface water supplies are generally low in dissolved minerals. Well supplies vary in dissolved minerals with depth and location. pH is the measure of acidity of a water supply based on the hydrogen ion. Water with a pH below 7.0 is corrosive. Above is considered alkaline water which is not a problem except in industry.

Ionization

Minerals dissolved in water are present as ions. Ions have an electrical charge; either positive or negative. Ion

exchange resins take advantage of this charge. Water Softeners are cation exchangers meaning they will exchange, or pick up all positive ions. Positive ions are calcium, magnesium, iron, copper, lead, sodium, zinc, manganese, mercury, and other metals.

Negative ions are not exchanged, or removed, by a water softener and negative ions are called anions. Negative ions are nitrate, sulfate, chloride, bicarbonate, and other similar minerals.

Minerals are measured by grains per gallon (gpg) or parts per million (ppm). The metric equivalent of ppm is milligrams per liter (mg/l).

A grain is a unit of weight (7,000 grains = one pound) parts per million is a finer measurement (17.1 ppm = one grain) one ppm = 8.33 pounds of mineral in one million gallons of water. More common minerals such as

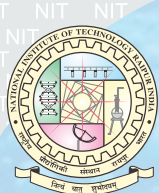
hardness are measured in gpg. Minerals such as iron are present in lesser quantities and are measured in ppm (or mg/l).

An analysis usually reports minerals as calcium carbonate equivalents to base results on a common denominator. Calcium and magnesium reported separately are reported as individual ions and must be converted to calcium carbonate equivalents to arrive at total hardness.



Total Dissolved Solids (TDS)

Total dissolved solids as reported on an analysis are the total of all minerals dissolved in the water. TDS



levels below 900 ppm do not present a problem in residential or commercial applications. TDS levels above 900 ppm will affect the performance of water softeners in the form of hardness and iron "leakage". All waters contain some natural sodium, and the higher the TDS, usually the higher the sodium level.

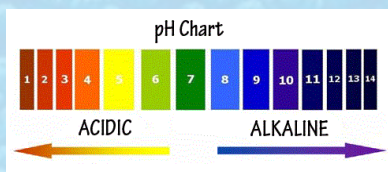
Sodium is used to regenerate a water softener and high levels of natural occurring sodium, plus that used to remove the hardness, will combine to a level high enough to partially regenerate the softener. Thus, water with a TDS of 1500 ppm and 40 grains of hardness will cause hardness and iron leakage.

TDS is also a factor in performance of Reverse Osmosis Systems. The R.O. membrane has limitations on TDS due to its ability or inability to carry away solids which might plug the membrane.

Alkalinity

Sometimes confused with

pH, has nothing to do with pH level. Alkalinity is due to



the presence of bicarbonate, carbonate, and hydrate ions. For our purposes alkalinity consists of calcium and magnesium bicarbonate. This alkalinity will produce CO₂ when water is heated; therefore, it can cause corrosion even though the pH is neutral. Usually alkalinity as high as 300 ppm is not a problem unless the hardness is below 10 gpg. An index called the saturation index is used to determine if a specific water will cause corrosion.

Water Problems and Treatment

Frequently several minerals are involved in a given water problem.

Hardness

Water hardness above 5 grains is considered for treatment. Hardness is calcium and magnesium which tends to revert back to the solid state when

water is heated. This solid material will form scale and will also combine with chemicals added to water such as detergents. The higher the hardness, the faster scale will form or the "harder" it is to produce suds for good cleaning action.

High hardness (10 grains and above) will shorten the life of water heaters, electric heating elements, and water using appliances.

A water softener removes the hardness minerals from water and replaces it with sodium which is an inert mineral. Sodium readily dissolves in water; it has a high solubility which means it will stay in solution unlike the hardness minerals. The source of sodium for regeneration of a softener is (sodium chloride). A softener capacity is based on how much sodium the resin will retain and what



that represents in grains of hardness removed by ion exchange.

A water softener will also exchange (remove) other metallic ions in solution such as iron, manganese, copper, etc. These ions must be dissolved in the water for complete removal. Oxidized iron will pass directly through the softener.

Iron (0.30 ppm will stain)

Stains fixtures and clothing red/brown. Unstable in water when water is exposed to oxygen. Yellow water indicates that part, or all of the iron, has oxidized and will precipitate out of the water.

Dissolved Iron is indicated when water drawn at tap is clear but turns yellow upon standing. A water softener will remove this "clear water" iron.

Oxidized Iron is indicated by yellow color as soon as water is drawn from tap. A sediment filter will remove this iron, but should be followed by a softener to remove iron still in solution. If iron removal only is

desired, a manganese greensand (ML-FFE) filter will remove both oxidized and dissolved iron.

CAUTION: Greensand should not be used on waters where pH is below 6.8.

Iron Bacteria is indicated when water pressure diminishes and iron stains are present. Lift toilet tank cover to confirm; slimy, stringy, brown growth is iron bacteria. This is most difficult form of iron and is caused by harmless bacterial that live in the absence of oxygen and feed on iron in water. It will eventually plug plumbing lines to reduce flow. Chlorinating well periodically may control growth. Best treatment is continuous chlorination followed by activated carbon filtration (ML-ACF). Optional treatment for lesser cases is the installation of a large diameter manual sediment filter (18KF-AG) to provide a "home" for them to grow.

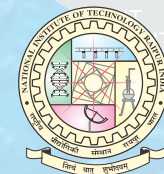
Manganese (0.20 ppm will stain)

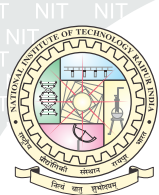
Similar to iron but difficult to oxidize; causes dark brown to black stains. Is frequently present with iron, but in lesser amounts. Best removal method is with water softener.

Hydrogen Sulfide (rotten egg odour)

Caused by decayed vegetation; is most troublesome due to bad odour and will cause corrosion; hydrogen lowers pH.

Hydrogen sulfide is sometimes present with iron and/or manganese. It will then cause black sticky precipitate which stains everything. Removal can be accomplished with a manganese greensand filter (up to 2 ppm H₂S) or chlorination using a chemical pump, retention tank, and followed by an activated carbon filter. The latter method is used when the H₂S is above 2 ppm or is accompanied by iron and low pH. A combination of chlorine and acid neutralizer is fed to adjust pH, oxidize the sulphur and iron in one operation.





Hydrogen sulfide is a gas and must be tested for at the job site to determine total H₂S level.

Low pH

Acidic condition (6.8 down to 5.0 pH) will corrode plumbing, erode porcelain, and put copper or iron in water depending upon type of plumbing. Stains will be blue/green for copper and red/brown for iron.

Adjustment of pH from 6.9 down to 6.5 can be done with an acid neutralizer filter (ML-ANF) which contains calcium carbonate (marble chips) media which slowly dissolves. It requires addition of more media about every two years depending upon pH level. Lower pH must be adjusted by feeding MAN-607 to the water with a chemical feed pump.



Pooja Chandrakar 5th sem
Chemical

Nitrates, Sulfates, Chlorides (Anions)

EPA or U.S. Public Health Service limits on the nitrate level permissible is 44 ppm as nitrate or 10 ppm as the nitrogen ion. Nitrate causes what is known as "blue babies" due to oxygen starvation (this can occur at 25 ppm nitrate). Nitrate presence is also an indicator of organic contamination.

Sulfates cause an astringent taste in the water. Concentrations of 30 gpg can have a laxative effect due to calcium sulfate.

Chlorides can combine with natural sodium or sodium produced by softening and result in salty tasting water. Both sulfates and chlorides, as well as nitrates, are most economically removed by reverse osmosis.

Reverse Osmosis

R.O. is a process of forcing water, by pressure, through a membrane (plastic) with microscopic pores which will separate the dissolved solids from the water. The water produced is equal in quality to distilled water.

R.O. removes up to 90-98 % of minerals, organics, bacteria, and viruses from water. dissolved gases such as chlorine or hydrogen sulfide are not removed. Many of today chemical contaminants are also removed.

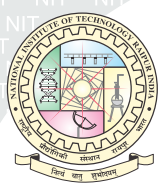
R.O. requires water which does not exceed 8 grains of hardness and all iron must be removed prior to the R.O. unit. A 5 micron cartridge filter is required ahead of the R.O. to eliminate sediment plugging of the membrane.



हिन्दी



ओम सिर्फ एक पवित्र ध्वनि ही नहीं,
बल्कि अनन्त शक्ति का प्रतीक है,
ओम ३ अक्षरों से बना होता है
आ-ओ-म जो की सर्व विदित माना जाता है।
आ का मतलब माना जाता है आविर्भाव या
उत्पन्न होना यानि किसी वस्तु का जन्म होना,
ओ का अर्थ उठने से माना जाता है उड़ना यानि विकास,
और म का अर्थ होता है मौन हो जाना
यानि की ब्रह्मलीन हो जाना।
ओम को पुरे ब्रह्माण्ड और पूरी सृष्टि
का स्वरूप माना जाता है।



रंग बिरंगे बस्तों को देखकर...

अपनी किस्मत को कचड़े में फेंककर!

बस यही सोचता हूँ कि...

आखिर इनका बोझ मैं कैसे उठा पाऊंगा।

उठाया जो इन्हें कंधों पर तो घर में रोटी कहाँ से लाऊंगा।।

कलम तो है...पर अधूरी सी।।

किताबों को मैं वजन से पहचानता हूँ।।

झोंकते हुए सपनों को फटे पैबंदों से छुपाना सीख गया हूँ।।

हिस्सा हूँ अगर तुम सबका तो मैं क्यों अलग सा लगता हूँ।।

सोते हो जब तुम सपनों की दुनिया में तो क्यों मैं भूखे पेट यूँ जगता हूँ।।

कोशिश की थी कभी तुम्हारे फेंके हुए जूतों में अपने पैरों को जमाने की।

पर मेरी ख्वाइशों की तरह मेरे पैर भी छोटे ही निकले।।



विपुल जैन

सेमेस्टर-3

यांत्रिकी

लड़की पराई क्यों

एक है धरा एक है आधार हमारा

फिर वो फूल और मैं कांटा क्यों।।

एक है उद्देश्य एक है मंजिल हमारी

फिर वो सफल और मैं असफल क्यों।।

एक है आसमां और एक है जमीं अपनी

फिर वो प्रकाश और मैं अंधकार क्यों।।

एक है आत्मा और एक है आवश्यकता अपनी

फिर वो चिराग और मैं बोझ क्यों।।

एक है माता एक है पिता हमारे

फिर लड़का 'अपना' और

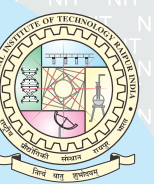
लड़की 'पराई' क्यों।।



शुभांजलि चौधरी

सेमेस्टर-3

खनन



सफलता के लिए शुरुआत जरूरी

तारीख 13 नवम्बर: लन्दन का वेम्बले स्टेडियम पीएम नरेन्द्र मोदी के स्वागत में सज चुका था जहाँ भारतीय समुदाय के लोग उन्हें सुनने के लिए बताब हो रहे थे। जल्द ही उनका भाषण शुरू हुआ और चंद पलों में सभी न्यूज चैनल्स में लाइव प्रसारित होने लगा। एकाएक उन्होंने लोगों से पूछा "क्या आप इमरान खान को जानते हो, मेरा देश इमरान खान जैसे लोगों में बसता है।" निश्चित रूप से यह नाम उस समय सभी समाचार चैनलों के लिए कौतुहल का विषय बन गया और देखते ही देखते अगले दिन उन सभी चैनल्स ने इमरान खान पर एक न्यूज रिपोर्ट तैयार कर ली थी। आखिर इमरान खान ने ऐसा क्या किया की इतने बड़े मंच पर पीएम ने उनकी तारीफ की?

राजस्थान के अलवर जिले के रहने वाल इमरान ने अब तक करीब 52 एजुकेशनल एप्स बनाई हैं जिन्हें वो एमएचआरडी को दान कर चुके हैं। अगर आप सोच रहे हैं की इमरान खान ने कम्प्यूटर या एप्लीकेशन डेवलपमेंट में कोई डिग्री ली होगी तो आप गलत हैं क्योंकि वो एक सरकारी स्कूल में संस्कृत टीचर हैं। दरअसल इमरान के छोटे भाई ने कम्प्यूटर इंजीनियरिंग से ग्रेजुएशन किया है और इमरान ने अपने खाली समय में उनकी किताबें पढ़ना शुरू की। सबसे पहले उन्होंने एचटीएमएल सीखी और साल

2005 में अपनी सबसे पहली वेबसाइट जीके टॉक लॉन्च की। उन्होंने अपनी वेबसाइट जिला कलेक्टर आशुतोष पेडणेकर को दिखाई और उन्होंने ही इमरान को एंड्राइड एप्प बनाने के लिए कहा क्योंकि इनका भविष्य सुनहरा था। उस समय उन्हें एंड्राइड एप्प की कोई खास जानकारी नहीं थी लेकिन उन्होंने सीखना जारी रखा और साल 2012 में अपनी पहली एप्प लांच की जिसे छात्रों की जबरदस्त प्रतिक्रिया मिली। इससे उन्हें और एप्प बनाने की प्रेरणा मिली और खासकर के हिंदी में क्योंकि इंग्लिश में पहले से काफी ऐसी सुविधाएं उपलब्ध थी। अगले तीन साल में उन्होंने ऐसी पचास से ज्यादा एप्प बना डाली और उन्हें एमएचआरडी को समर्पित कर दिया क्योंकि वो ज्यादा से ज्यादा छात्रों को फायदा पहुँचाना चाहते थे। अब तक उनके एप्स को चार करोड़ से ज्यादा बार देखा गया है और तीस लाख से ज्यादा बार डाउनलोड हो चुके हैं।

आज के समय जब भारत में हर साल करीब 4200 नए स्टार्टअप आ रहे हैं तो इमरान खान जैसी शख्सियत युवा और भावी इंटरप्रेन्योर्स को बहुत कुछ सिखाती है। युवाओं के पास शिक्षा, सुविधा और मंच की कमी नहीं है जबकि इमरान के पास शिक्षा के नाम पर सिर्फ दो साल का टीचर ट्रेनिंग कोर्स था।

भारत सरकार भी युवा उद्यमियों को

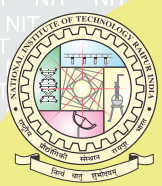
ज्यादा से ज्यादा सहयोग देना चाहती है और इसके लिए इस साल 16 जनवरी को स्टार्टअप इंडिया स्टैंडअप इंडिया स्कीम लांच की गयी। पीएम मोदी ने यह योजना शुरू करके अपना बिजनेस शुरू करने के लिए सपने देखने वालों को एक तोहफा दिया है। इस दौरान पीएम ने कहा की लोगों के पास हजारों नए-नए आईडिया हैं और वो चाहें तो इससे कमाल कर सकते हैं। तकनीक से जुड़के लोग अपनी बात कहीं भी पहुँचा सकते हैं। उन्होंने कहा की हमें ई-कॉमर्स के क्षेत्र में दो कदम और आगे बढ़ना है।

इस स्टार्टअप इंडिया प्लान के जरिए सरकार की कोशिश देश के युवाओं को जॉब सीकर से जॉब क्रिएटर बनाना है। युवाओं को इंटरप्रेन्योरशिप के लिए प्रेरित करने के लिए ऐसी योजनायें काफी हैं। अगर आप कोशिश करेंगे तो शायद सफल हो जायें या फिर असफल लेकिन अगर कोशिश नहीं की तो निश्चित रूप से असफल रहेंगे। किसी भी काम को करने के लिए एक शुरुआत की जरूरत होती है और इसके लिए पैसे मायने नहीं रखते बल्कि रिस्क लेना जरूरी होता है, बस जरूरत अपने विचारों को सही दिशा देने की है।



प्रेम सिंह शेखावत





तस्माद् त्व शरणं मम् दीनबन्धो

शांत, निष्ठल, तेजस्वी मन में आज उठी ये जिज्ञासा
धीर-गंभीर, गहरे सागर तल में लहरों से शोर करने की आशा
मूक जीवों, खग-चराचरों की चहचहाहट की सुरमयी भाषा
नव-आलोकित नूतन जग पर सुरम्य राग छेड़ने की अभिलाषा
शांत, निष्ठल, तेजस्वी मन में आज उठी ये जिज्ञासा...(2)

शक्ति सम्पन्न, प्राणापन्न, गृह-नक्षत्रों का ये प्रदत्त आदेश
शीतल-निर्मल वात बहे, क्यों न दे नवल जीवन संदेश ?
तात हो या बन्धु सा कोई, अपना हो या पराया सही
अनादि-अनन्त, अपार-असीम शक्ति से मले की अभिलाषा
शांत, निष्ठल, तेजस्वी मन में आज उठी ये जिज्ञासा...(2)

क्षुद्रित को अन्न, स्थाने-अस्थाने, विपदा में शरण हैं जो
परमज्ञानी शक्ति, न्याय-अन्याय में समादृष्टा-समावृत्ता वो
नमामि तत् चरणं, भवामि तस्य शरणं, मम् परम देवं!
मान-काले नाम जपूँ, बस चरण-धूलि की अभिलाषा
शांत, निष्ठल, तेजस्वी मन में आज उठी ये जिज्ञासा... (2)

कर्म भरी-खोटी, क्षुद्र चाह की आशा-पूर्ति लिए आया बन्धों!
पापं क्षमामि, शरणं ददामि, कृपा कुरु, अहं तस्माद् मनुज बन्धों!
गाया यही बारंबार, तस्माद् त्व शरणं मम् दीनबन्धो, मम् दीनबन्धों !!
शांत, निष्ठल, तेजस्वी मन में उठी आज बस ये पाने की आशा

परम चरणों में शरण पाने की अभिलाषा !
शरण पाने की अभिलाषा !!
शरण पाने की अभिलाषा !!!



सुकृति रंजन सामंता सेमेस्टर-7
सिविल

मन के पंछी

अपने मन के पंछियों को उड़ने दो,
मन के बंधनों को टुटने दो,
एक मौका मिला है अभी, न तुम
गुमसुम रहो,

दूसरा न शायद मिलेगा कभी, पहले तो
तुम न जाने दो।

जिन्दगी की रफ्तार मे न खो देना खुद
को कभी,
वरना पछताते रह जाओगे तुम और
आगे बढ़ जाएंगे सभी।

इसलिए मन के पंछियों को उड़ने दो,
उन्हें भी उड़ान भरने दो,
और ऊँचाइयों तक पहुँच कर,
और भी नए सपने खुले नयनों से
देखने दो,
अपने मन के पंछियों को भी उड़ने दो।



ऐश्वर्य सोनी सेमेस्टर-1
धातुकर्म

पिता

‘पिता’ यह शब्द है कितना महान
शायद जानता है हर इंसान
‘‘आसमां से भी ऊँचा पिता होता है’’
जो बचपन से सुनती आई, वह जान भी लिया है।

कहते हैं हर बेटी का पहला प्रेम उसका पिता होता है
हाँ सच है ये क्योंकि उसने मेरी खुशी के
लिए बंजारी जमीन को भी जोता है।

मुझे नहीं पता मैंने अपनी जिंदगी मे क्या खोया है या
पाया है
पर उसकी आँखें हमेशा कहती हैं कि मुझसे ज्यादा वो
रोया है।

मुझे जिस दुनिया ने हर मोड़ पर तुकराया था
उसी जालिम दुनिया मे वह मेरा सहाया बन आया था

जिस सीढ़ी पर चढ़ने से डरती थी मैं
लड़खड़ाकर गिरने से डरती थी मैं
‘‘पगली डरती क्यों है, मैं हूँ ना’’
सह सुन ना जाने क्या हुआ, पर हाँ, अपने डर की
विजेता हुई मैं,

जानती हूँ मैं, उसके बिना पत्थर हूँ मैं
या फिर दुनिया ने मुझे कोयला बतलाया था,
ये दुनिया जो भरी रत्नों से,
उसने खुद पत्थर बन मुझे हीरा बनाया था।



आकांक्षा गौर सेमेस्टर-3
संगणक विज्ञान

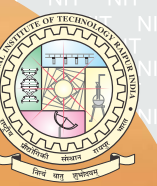
ना जाने वो कैसा जादू करता था
अपनी बचकानी हरकतों से मुझे हँसाया करता था

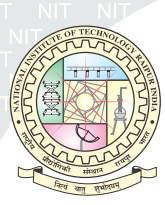
मैं कुछ छोटे-बड़े सपने देखती थी,
सपने मेरे पूरे होते, खुशी उसे होती थी
सबकी तरह, मैं भी भगवान को पूजती हूँ।
संकट जाने पर उसे याद करती हूँ या यूँ कह लें अपना
भगवान उसमें दुंदूती हूँ।

कोई आशिक जीता होगा अपनी प्रेमिका के लिये
पर एक वो है, पिता जो है, जीता है मेरे लिये।

लोगों ने उससे कहा होगा
‘‘मुबारक हो बेटी का सुख घर आया है’’
पर हर बार, उसे देख मेरा मन कहता है
मुबारक हो जो ऐसे पिता को पाया है

सोचा है उसका हिसाब पूरा कर दूंगी मैं,
वो त्याग, वो आस वापस लौटा दूंगी मैं
वो प्यार, वो दुलार जो मैंने उससे पाया है
पर पता है ना कर सकूंगी ये
क्योंकि अनगिनत को क्या कभी कोई छू पाया है।

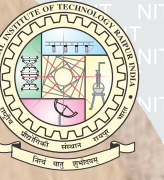




देशभक्त

जब मैंने अपना घर दिया ।
 अपने माँ-बाप की आँखों में आसूँ देखे ।
 भाई-बहनों की आँखों में आसूँ देखे ।
 अपने हमदम को रुलाया हमने ।
 आँसू के घूँट भी पिलाया हमने ।
 जब मैंने अपना घर छोड़ दिया ।।
 दिल मे रखा वो प्यार आज भी है ।
 किसे समझाऊँ संसार आज भी है ।
 मैंने गला खुद का घोंट लिया ।
 जब मैंने अपना घर छोड़ दिया ।
 कश्मीर की रक्षा मे तैनात रहा ।
 जब तन पे गोली खायी ।
 तब कोई नहीं माँ मुझे याद आयी ।
 फिर भी मैंने अपना दम तोड़ दिया ।
 जब मैंने अपना घर छोड़ दिया ।।
 दुख है इतना कि रुलाया हमने ।
 सबकी आँखों मे आँसू लाया हमने ।
 अपना घर ही छोड़ा था, देश छोड़ दिया ।
 खुश हूँ कि देश सलामी देगा ।
 इससे ज्यादा खुशनसीब कौन होगा ।
 जब मैंने अपना घर छोड़ दिया ।।
 हे माता दुआ आज भी कर ।
 तेरा लाल रहेगा हमेशा अमर ।
 मेरे काम को पूरा मेरा लाल करेगा ।
 जब मैंने अपना घर छोड़ दिया ।

अरुण कुमार



पढ़-लिखकर मैं माँ-बाप का सर गर्व से ऊँचा कर जाऊँ ।
 दीन-दुखी को दो दिन का मैं दो निवाला दे जाऊँ ।।

अपनी जान गंवाकर भी मैं मकसद पूरा कर जाऊँ ।
 पढ़-लिखकर मैं माँ-बाप का सर गर्व से ऊँचा कर जाऊँ ।।

चमत्कार को इस दुनिया मे, चमत्कार मैं कर जाऊँ ।
 अपने बेढ़ंगे कामों से मैं कलाम सा बन जाऊँ ।।

मोदी जैसा सबके लब पर अपना नाम मैं कर जाऊँ ।
 पढ़-लिखकर मैं माँ-बाप का सर गर्व से ऊँचा कर जाऊँ ।।

माँ

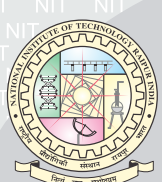
अनभित दर्द सहकर मुझे इस दुनिया मे लाई,
 इस दर्द के बावजूद मेरे आने पर मुस्कुराई ।
 इन कोमल लबों ने जब चहकना शुरु किया,
 तब सँवारा मेरे लब्जों को और सपना दिया ।
 जब मेरे नन्हें पैरों ने चलना शुरु किया,
 तब संभाला तूने और हिम्मत दिया ।
 इन आँखों को तूने सही और गलत का फर्क दिखाया,
 और इस टेढ़ी-मेढ़ी दुनिया का तर्क बताया ।
 इन आँखों को तूने दिखाया जो सपना,
 हर सपना पूरा करूंगा माँ जो तेरा है अपना ।
 मेरे लिए तूने त्याग दी अपनी सारी ख्वाहिशें,
 क्यों कि तेरे लिए पहले मैं माँ फिर बाद मे तेरी ख्वाहिशें ।



दिग्विजय सिंह राजपूत

सेमेस्टर-3

सिविल



मीडिया का चेहरा

तुम चोर हो, दलाल हो, तुम देश के गद्दार हो,
नाम तुम्हारा मीडिया, हर जुल्म के हकदार हो,
जनता के भरोसे को, पैरों तले रौंद दिया,
जब सवाल उठे खुद पर ,तो पूछते हो कौन किया ।
नेताओं के तलवे चाटें ,बेइमानी नस-नस में,
कितनी भी तुम गलती करो ,होंगे हम तुम्हारे वश में ।
चला रहे हो देश पर तुम हिंसा के चाबुक,
इतनी मौतें देख ली, कब होंगे तुम भावुक ?
धर्म-धर्म का खेल तुम्हारा ,कभी तो दिखाओ सच्चाई,
कभी राम की कभी रहिम की ,प्रदर्शित करो अच्छाई ।
भरोसा जितना बाकी है ,उसे तुम्हें ही बचाना है,
आग लगी जो सीने में, उसे तुम्हें ही बुझानी है ।
ईमान जगा अपना,
मार्ग पकड़ लो न्याय का,
क्योंकि इस आग कि
दास्तां तुम्हें ही सुनानी है ।



शशिकांत पांडे

सेमेस्टर-3

सिविल

बचपन

यारो बताओ कोई तरकीब, हो रहा है सब अजीब,
पागल दिल ने बात है ठानी शुरू करो फिर से कहानी ।
इच्छा है चुपके से मन मे, कैसे लौटूँ बचपन में
मन ने दिल से कहा, दुबारा मेरा भी मन नहीं है यारा ।
इस जहाँ में ये सब कुछ अब सहने का,
थक गया हूँ मैं भी यहाँ, कुछ बातें सोच-सोचकर,
पैसा, गाड़ी, बंगला, खा रहें हैं नोच-नोचकर ।
कहा गया वो बचपन हमारा, खुद ही थे खुद का सहारा ।
माँ कि वो प्यारी पुकार कहाँ गयी,
दूर आ गये इतना की वो दिल में समा गयी ।
गाँव हमारा था पुरा संसार, पीपल, गलियाँ, नदी की धार,
अब जाने संसार का किनारा, तो खो गया गाँव हमारा ।
खुलकर हंसते खुलकर रोते न थी कोई सीमा न थी कोई वजह,
वजह तो मिल गयी है रोने की पर नहीं मिली कोई जगह ।
गाँव से शहर आ गए, हो गए एडवांस हम,
माँ-बाप छूटे गाँव छूटा, इस दर्द को कैसे भुलाए हम ।
अभी ये हाल है, आगे क्या होगा जीवन में,
अरे यारी कोई तो बताओ कैसे लौटूँ बचपन में ।

आँखे मेरी क्षुब्ध हो गई

आँखे मेरी क्षुब्ध हो गई
या अंधकार सामने आ गई ।
पुतलियां मेरी नम हो गई
शायद नज़रें ही मेरी खो गई ।
शब्द पन्ने मे लीन हो गए
या वाक्यांश ही बड़ी हो गई ।
पूरे पुस्तक ही कोरे हो गए
शायद शब्द ही मेरी खो गई ।
सभी साथ ही मेरे छोड़ हो गए
या किस्मत ही मुझसे रुठ गई ।
मेरे सफर ही लम्बे हो गए
शायद चरित्र ही मेरी खो गई ।
खून जो थे कतरों में बंट गए
या धड़कन ही मेरी रुक गई ।
दिल जो थे पत्थर के हो गए
शायद तन मिट्टी में मिल गई ।
खुशियों में ही हम डूबे रह गए
या मन सपने में खो गई ।
क्या दुनिया वाले धोखा दे गए
नहीं... शायद पहचान ही मेरी खो गई ।



अनुपम कुमार पाटले

सेमेस्टर-1

मैकेनिकल



समय की पहेली

समय के वेग को अब पहचानों,
देर हुई तो मतलब जानो,
तुमसे सब कुछ छुट रहा है,
चक्र भाग्य का टूट रहा है ।

समय है नदी की चलती प्रवाह की तरह,
ना कभी रुका है ना कभी रुकेगा,
मनुष्य! तुम भी चल दो अपनी मंज़िल की तरफ,
ना कोई रोक सके ना कोई टोक सके ।

गलती कर हजारों कर,
पर हर गलती से सिखकर नई गलती कर,
इस नई गलतियों के उस पार ही मंज़िल है,
बस बेफिकर, बिना रुके कदम बढ़ाए जा ।

ज़िन्दगी का मकसद ही खुश रहना है,
सफलता हो या ना हो खुश रहना है,
ज़िन्दगी में लक्ष्य का होना अनिवार्य है,
जो हर दिन आपको व्यस्त होने की वजह दे ।

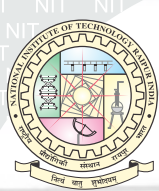
इसलिए मैं कहती हूँ ज़िंदगी एक पहेली है,
समय ही इसकी सहेली है,
जो समय को दोस्त बनाएगा,
वो हर दम हर कदम सही बढ़ाएगा ।



जी. लावण्या

सेमेस्टर-4

इलेक्ट्रिकल



आखिर मैं क्यों लिखता हूँ?



आखिर मैं क्यों लिखता हूँ?

एक आवाज, एक शक-सा-विचार,

मेरे दिल में खटकता है,

और दिल बेताब हो उठता है।

ज़िन्दगी में, कुछ करने की तमन्ना जाग उठती है,

और कलम मेरे हाथों से, जैसे चिपक सी जाती है।

मैं कोसता हूँ, अपनी किस्मत को,

फिर हंसता हूँ, अपनी किस्मत को,

फिर हंसता हूँ, बड़बड़ाता हूँ, पर क्यों?

एक ऐसी भाव, एक अजीब सी अभाव,

जिसकी तलाश में, मैं भटकता हूँ।

उसकी चाह में मैं तड़पता हूँ, पर क्यों?

आखिर मैं क्यों लिखता हूँ?

मुझे नकारा गया, ललकारा गया,

हर एक चेहरा, प्रतीक की तरह दिखाया गया।

कभी-कभी महसूस होता है,

क्या रखा है इस ज़िंदगी में?

और क्यों? आखिर मैं क्यों लिखता हूँ?

पर दिल फिर से बदल जाता है,

कि कुछ तो करना है, इस ज़िंदगी में।

धीरे से रात हो जाती है,

साँसे थमने जैसे हो जाती है,

पर ना ही विचार थमने का नाम लेता है,

और ना ही समय रुकने का नाम लेता है।

सोचते-सोचते फिर जल उठता हूँ।

ठंडक तो पहुँचती है, फिर मैं फिर से बेचैन हो उठता हूँ।

पर क्यों? रेत के कण, जिसमें कपड़ें रगड़-रगड़,

पूरी रात बीता दी मैंने,

पर हताशा दूर ना हुई।

किसी की आस में, तलाश में,

मैं भटकता रहा और

यही सोचते रहा,

यह “अनुपम” कविता तो एक लाश है,

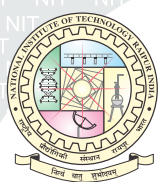
फिर क्यों? आखिर मैं क्यों लिखता हूँ?



अनुपम कुमार पाटले

सेमेस्टर-1

मैकेनिकल



team Sanskriti

The enigma and charm of culture has amalgamated thoughts, imagination and people. We at NIT Raipur are nourishing this by SANSKRITI – The cultural committee as we are known. The cultural committee of NIT Raipur flaunts its teamwork and untiring contribution to cultural events and various others occurring in college prefaces.

In the last academic year our session started with celebration of Independence Day with full of patriotism followed by commencement of engineer's day and teacher's day and the online event 'Jab Hum Bacche The' received great response which were conducted on eve of children's day. This fills us with the inevitable enthusiasm needed along with academics.

Our social causes "Be A Teacher" and "Signage" received great applause all around and done in a successful manner.

During our last session we conducted art workshop,

dance workshop and cyber security workshop in which students participated in maximum number and made an effort to improve their skills and supported us.

ECLECTIKA – The most awaited cultural fest was organised from 26th – 28th February 2016 promising a joyful ride of 3 days. The theme of eclectika '16 was "**FESTA-DA-CARNAVAL**".

Eclectika is central India's largest fest. Eclectika'16 was the 10th year of eclectika. Its journey started in 2007 which laid the foundation of endless voyage for enjoyment.

Eclectika'16 had given lot of fun with 7 mega events, 19 cultural events and 3 online events and certain other events are also conducted in collaboration with other committee like Literary, Go-Green and Innovation Club.

Eclectika'16 celebration started with its 1st mega event art exhibition conducted on 24th February followed by The Nukkad Natak-Goonj, which was centre of attraction for

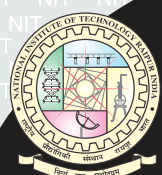
commencing day and Clash Of Choreos, Avirbhav, Nrityangan in which students from all over India participated.

The Major attractions of Eclectika'16 were the celeb night, in which India's most celebrated voice 'Mohit Chauhan' mesmerised students with his performance, and the stunt show performed by Murray. The Eclectika concluded with cultural night in which various students of the college participated with great enthusiasm.

We, Sanskriti-The Cultural Committee, feel proud to announce that we have completed our academic session with lots of sincerity and commitment. We vow to keep lightened as always with support from our respected teachers, beloved teammates and most importantly crowding folks and will always keep spreading youth in campus heading towards growth.



Eclectica



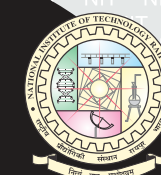
eclectica



eclectica



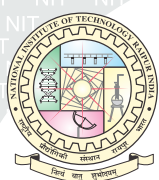
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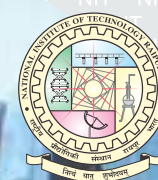
the Dramatics Club

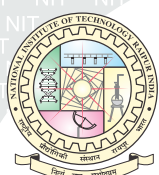
The journey began last session with a group of dedicated dramatics enthusiast headed and supported by their seniors jestin Mathew and Vishwanath Kaimal having zeal for a club with an objective to provide platform for all the budding talents out there, and finally ABHINAY - The Dramatics Club of NIT Raipur was born with 40+ members consisting of actors, script writers, photographers, designer etc. with Dr. Govardhan Bhatt as faculty In-charge.

Since then the club actively participated in variuos street play competitions both at state and national level such as MOOD INDIGO - CULTURAL FEST OF IITB, EQINOX - ANNUAL FEST OF IIM Raipur etc.

The club also organised dramatics night in association with Rotary club of Raipur and also in Eclectika 2k16.

This session the club is looking forward to grow even more by getting involved in more events and creating some short movies too.





the Entrepreneurship Cell



“Be the master of your own destiny” – I guess everyone must be quite acquainted with this saying but has anyone ever imagined what would it feel like to live this thought – if you have always been the one who despises being confined to the boundaries, always been the one who does what he WANTS and what he HAS TO then ENTREPRENEURSHIP will serve as wings to all your dreams. It can make you feel the true sense of freedom and the sheer independence in making your own decisions which you cannot do while doing job.

We all have aspirations and IDEAS hidden in our cocoon but no one ever tries to devour it. If you think you have ideas then we can be the moth to help you explore it.

We here at NIT Raipur have formed an association – **THE ENTREPRENEURSHIP CELL** which paves path for such budding talent, our missions has always been to inculcate entrepreneurship skills

among the students .

The globe has been hit by an immensely strong wave of start ups and we leave no stone unturned to provide the necessary exposure of this field so that they get accustomed to see themselves as FUTURE ENTREPRENEURS. To accomplish our goal we have organized various prolific events which nurture overall outlook of the students. Some of the prominent ones being:

AAVARTAN - Aavartan 2K15 , the annual fest of National Institute of Technology Raipur, made its much awaited grand comeback as the second Techno-management of the institute. Inspiring a participation of more than 2000 from all over Chhattisgarh, Aavartan 2015 rolled with a many new, bigger and better events than before. The National Business Challenge quiz conducted amongst 20 schools across Raipur, Cluedo- A treasure

hunt for the detective streaked and adventure freaked, BrandWarz - a superhero face off, adrenaline pumping Game of Stakes, and Hastag Challenge for the "WordWise", these events were some of this Aavartan's mega successes.

E-SUMMIT - The flagship event of The Entrepreneurship Cell of NIT Raipur, E-Summit is a consortium of India's leading Entrepreneurs and Speakers .The mind-blowing session of E-Summit 2K15 brought forth guest lectures by talented entrepreneurs who carved a niche for their blooming startups in the cut-throat competition business world.

Loaded with undeterred enthusiasm, Prateek Sethi engaged an audience of more than 400 eager young minds. Transporting back the students into their teens, he shared his experiences working with "Crash" and subsequent formulation of Trip Creative Services. The youngest, and perhaps the

cutest CEOs of India, Shravan and Sanjay Kumaran lifted up the spirits of the audience with quick wit, humour and easy demeanor .The teenagers won hearts and accolades as they spoke adorably about their app development unit "Go Dimensions". Anirudh Sharma, an MIT Graduate left everyone in awe as he spoke about Ducere Technologies and his contribution in creating an innovation ecosystem in India. His product "LeChal" (electronic shoes for the visually impaired) is a perfect example of innovation blended with creativity.

Workshops in association with MSME: In 2015, E-Cell in collaboration with Medium, Small and Micro Enterprise, Government of India conducted three workshops to promote entrepreneurship, by providing all the necessary information one needs to keep in mind before entering the wonder world of start-ups. Most recent was conducted on April 2016 it was an informative session with a workshop on “Detail Project Report”.

ENTRASPIRE: E-Cell's very own blog, Entraspire publish

the hot news of the entrepreneurship world. It talks about the inspirational stories from the amazing world of entrepreneurship, about the latest reforms and provides the insights necessary for a budding entrepreneur.

Things to look forward to in 2016:

IGNITION: The B-plan competition, introducing the thrilling journey of a start-up. Right from the start of pitching the idea to investment, feel the pressure, the excitement and the passion of being an entrepreneur.

START-UP CAMP: This year E-Cell invites all the start-ups from all around India to exhibit themselves, talk about their journey and their future. It not only provides an opportunity for students to interact with the players of “The Game” but also to grab impressive internships.

E-SUMMIT(2K16): This time it's bigger, it's better, it's like something never done before. This year E-Cell invites the thriving entrepreneurs from all around the India, people who left their mark on the

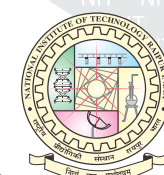
market, who achieved what we can only imagine.

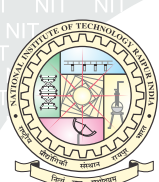
Ambition is the steam that drives men forward on the road to success if only he has the engine to drive it. If you have ideas which build your ambition then we can provide the engine to drive you through the road. If you dream to do something different, have an irresistible urge to execute your ideas then here is the perfect path for you from our exciting events to our heart warming interactive sessions all will act as a stepping stone to your success.

With us you will not only be an engineer but a LEADER

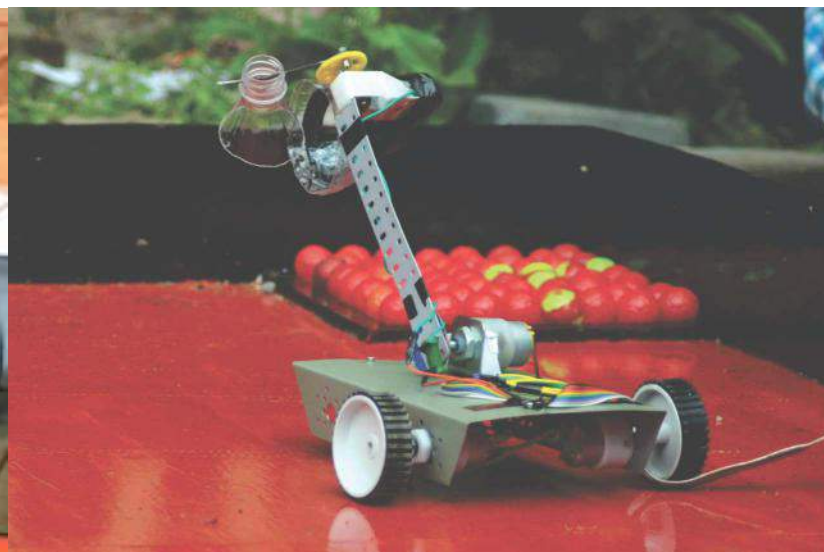
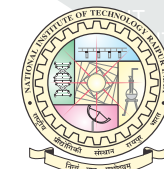
ALL these years our ideology has reminded the same- the best way to predict your future is to CREATE it.....SO KEEP CALM AND HIRE YOURSELF!!

So that you don't miss out on the adventure ahead, keep a close eye on our website www.ecellnitrr.org and to know more about the speakers of this year's E-Summit check out www.esummit.ecellnitrr.org , because the best is yet to come.





AAVARTAN





go green

“BEING INDULGED IN MODERNISATION, TAKING US TO THE PINNACLE, YET IT FORGIVES US FOR NO REMORSE” To this moment these are the words of anonymous, but not anymore. ‘US’ and ‘IT’ for no interpretation can be adjudicated by anyone, that’s how ‘us’ have exploited ‘it’.

“WE CARE THE GREEN MOVEMENT, NIT RAIPUR” has come up with the prophecy of seizing the tainted nature and turning it into the one that we had passed, by enlightening people to acknowledge the situation.

Our committee which has been given a splendid platform to stand up and driven constantly for various endeavours in different fields by the endorsement of notable personality Dr.Sameer Bajpai.

The main intention of the committee is to provoke the people from the state of being unconscious about the

present environmental issues that we face, so that we can contribute something to the nature at our personal level.

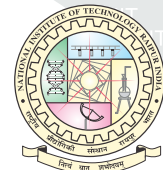
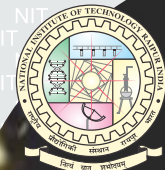
In the previous academic session, the committee came out with many overwhelming and exciting events. Radically starting with “Snake Mania”, this event had depicted various classes of snakes. Technical experts were also present who gave the measures of dealing with snakes. It was organised in collaboration with **Nova Nature** Club. Next, the time had come for the biggest event “Green Ganesha”, the main objective of the event was to make ganesh idols using natural colours and clay. This was to have a decline in usage of chemicals and other constituents which could adversely effect the environment.

Our most prominent technical fest “Aavartan” also had the presence of our committee in the form of contentions of problem statements related to our environmental issues, and students were encouraged to come up with some innovative solutions according to their

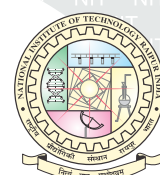
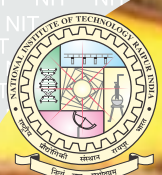
ideology. As the saying goes **cleanliness is next to godliness** we had a “campus clean up”, an initiative taken by all students and faculties in order to maintain spruceness in the campus.

Coming up next was “The Green Doodle Show”, in which students made doodles in which they portrayed how to spread awareness and apprehensions about nature and environment. Later, in mid summers we had taken up an activity of relegating thirsts of birds by hanging small pots to the trees around the college. Last but not the least was the most exciting “Green Trip”. The trip had witnessed many students and other officials who were made to know a lot about the medicinal values of flora and also information of various forest activities.

All the remarkable activities and magnificent events came up with flying colours and act as an asset, so that, one can trigger their ideas and obliged values thus enabling to promote our initiative for the Cleanliness of nature.



E-Summit



Innovation Club

Initiated in the year 2015 with the motto “Innovate and Thrive”, the club mainly focuses on the issues faced by the society which can be resolved by an engineer. The main idea of the club is to develop versatility and prodigal intuition which are the primary abilities to be possessed by an engineer. Students learn all the courses of engineering apart from his/her stream to an amateur standard so that a problem can be tackled with utmost knowledge.

Some which we have developed were resolving traffic bottlenecks & earthquake alarm system.

An engineering solution to resolve transportation bottlenecks in smart cities:
Proposed Solution- A copper coil is to be placed on the road in front of each signal supplied with a specific voltage, generating a feeble magnetic field over it. When vehicles come to halt on the signal, they will cut the magnetic flux of the field produced by loop. The generated voltage drop will be proportional to the area covered by the vehicles,

which acts as a direct indicator of traffic accumulation on that lane.

Engineers eye: Earthquake alarm system Theory: As long as the light falls on ldr the signals are not sent. The sensor and ldr are installed in seismograph such that the needle is in between the ldr and laser. As soon as the earthquake is detected the needle deflects and automatically the signals are sent to arduino board and then to laptop and at last to the personal email of rescue team. All this happens in span of 2-3 secs. Using ifttt we can make the people aware near by.

Innovation club has organised the following events:

In aavartan 15'- Math-e-magic and Beat da Clock

In eclecticika 16'- Smart city challenge

And apart from the fests, Engineer's eye has also been organised.

☉ Math-e-magic is a pure mathematics quiz event

increasing in the level of difficulty from the first round to the last.

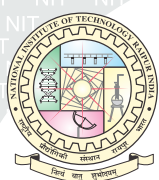
☉ Beat Da Clock is a unique event. It starts with a science quiz and ends with the students making carts to race. Unlike any other event,

☉ Smart city challenge is to propose innovative ideas for the already named smart cities and cities yet to be made. A set of problem statements are given to the students regarding the smart city and students have to come up with potential technical solutions to them.

☉ Engineer's eye is yet another problem statement event but exclusively focuses on the social issues of the society. These problem statements are acquired from the major government projects and we are looking forward to take these ideas and their solutions to national level.

VISION OF THE CLUB

To be a centre of Excellence and a chief problem solver of the society.



Interact

What started on a rooftop someday between Tarun Kaushik & Sangeet Vijay Sagar has become a phenomenon today. Interact is a name, which has become synonymous with quizzing in NIT Raipur as well as entire Chhattisgarh. Started in 'a bleak land' devoid of any fandom for quizzing, we had a vision to carve a niche for NIT Raipur in this battlefield.

It started as a Facebook group, which NIT Raipur embraced with all heart. Today, there are 3500+ members in the group, not

only from NIT, but also regional quizzing heavyweights like IIM & HNLU.

The quizzers of NIT Raipur now frequently participate in online quizzes which range from topics like Business, Sports, History & also Harry Potter. The best part about the club is that anyone can organise a Quiz anytime.

Apart from online quizzes, Interact has proved its mettle in Campus Quizzes. From organising the Intra-College "The Quiz" with a

participation of 200+ students to the Inter-College "i-Quest 3.0" with a foot-fall of 700+ students, which has become one of the flagship events of Eclectika ; Interact has grown in all aspects.

"The Technomic Quotient", one of the flagship events of Aavartan, registers a foot-fall of around 500-600 students from NIT as well as other colleges.

Prelims were also organised in IIM & HNLU, which were received enthusiastically.

Events conducted in 2015-16 :

Event	Winner
The Quiz	Aditya Patel & Tushar Goswami
The Technomic Quotient 3.0	Kevin James & Kunal Bindra
i-Quest 3.0	Prashun Sinha & Ankit Mishra
Apotheosis (Inter NIT Quiz)	Faisal Khan & Chinmay Cholkar

The club is now official with a 6 member team.

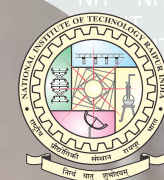
- Commanders in Chief : Sagar Raja, Shubham Amraotkar, Nilay Pandey
- Ministers of Propaganda : Abhik Sarkar, Faisal Khan, Chinmay Cholkar

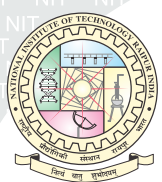
Enthused by the on campus quizzes, our students have started making their mark in State level & National level competitions. Interact Club congratulates Sangeet Vijay Sagar & Prasun Sinha for winning CSLQ (Organised by

IIM Raipur) & TATA Crucible Campus Quiz 2016.

All the budding quizzers are invited :

www.facebook.com/groups/interactnitr





Literary Committee

The Journey of 2015-16

The Journey of 2015-16

Every year amidst the turmoil and stress that each of us have to go through weather academic or otherwise, the team Literati tries to bring something new and fun to the table. The journey of 2015-16 was an interesting and rich experience for us (and hopefully you too).

Unfortunately if you missed any of our events, here's quick guide to them so that you learn a little more about us and don't miss out on the good stuff,

Essay writing competition by Shri Ram Chandra Mission & UN information centre

Literary Committee has always been about literature and creative writing. Those are our core competencies and we stick to them. Thus, we started our year by this competition. This was a national level competition and was originally conducted by SRCM in collaboration

with the United Nations Information centre for Bhutan & India. The topic was "A man who has no inner self is a slave to his surroundings". I know that it was more on the philosophical side and many of the students had problems grappling with the topic, our team members helped them excel. The language options were both English and Hindi and submissions were made online.

Seminar by Mr. B.C. Yadu

Has it ever happened to you that you are on a stage for a speech with a lot of people looking at you and you are freakin' scared even though you imagined yourself as Jordan Belfort in your head? Well we thought so. That's why we came up with this seminar. In this Mr. Yadu talked about stage fear, mike handling and poetry. Literally, this guy was like a wizard as he was good at so many things including poetry, public speaking, handling fear & tough moments and

mannerism. The seminar was very enlightening & got excellent response from the attendees.

The Front Page

Engineer's day is a very important day for all of us as we all, are aiming (maybe some not willingly) to become an engineer ourselves. Various committees of our college organize various events on this occasion and our team tried to be the glue that binds all. This was an event which unleashed the journalist in us. The participants had to cover any event going on engineer's day and submit a report on the same online. The best report was published in SHILPI (the name of the magazine you're reading right now). The judging criteria was fluency and brevity in writing.

VIGILANCE WEEK

(Essay writing & debate competition)

VIGILANCE week is celebrated every year in this

country to promote good governance and integrity from 26th to 31st October. This celebration also coincides with the birthday of Sardar Vallabh Bhai Patel. Thus, our team in collaboration with SECL Bilaspur celebrated this week with the organization of Essay writing and Debate competition. The topic for these were all related to the promotion of honesty & legitimacy. The options for language were both Hindi and English. We got an overwhelming response from the students as a lot of students came in for both the competitions and the screening was really tough for both us and our Judges. The debate competition for both English and Hindi was recorded for our national website and it was a very satisfying and knowledgeable experience for both the participants and our team members. Handsome cash prizes and certificates were given to the winners & since SECL collaborated with our team to organize this event, an offer of internship under SECL was also included in the prize wagon. This was the first mega event that we conducted in this session.

Quiz Competition

As much as we love the exam time, our team understands what we all have to go through (especially the "one-nighters"). Thus to encourage the love for knowledge, we organized a quiz competition on 26th November. This was our way of celebrating the CONSTITUTION DAY. This event also witnessed a good response from the participants and attractive (we tried!) cash prizes were given to the winners.

FESTA DE CARNIVAL

Eclectika truly is all about enjoyment and fun & in this one too various committees conducted different flavour of events & competitions. Literati too joined the rally here with the following events,

Hansard

This was a parliamentary debate competition. It was conducted in 3 levels with the usual drill of written test, extempore and the final round of debate. Hansard was our mega event and it's been a tradition till now that the event garners a lot of buzz and teams from all over Chhattisgarh come in to

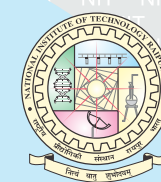
participate. Before the actual competition our team also conducts a test and train the selected candidates for the final deal so that they match the standards of this competition.

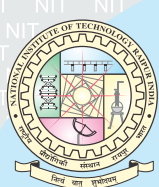
Legal Eagle

Literati has always been objectified with debates, essays and speeches. Well, that sure is our forte but we try to bring something new every time we hang around. And that's pretty much what we did with Legal Eagle. The initial drill was usual with extempore and GD, but the final round was what made this one a mega event. We had a "moot court". Now, that sure is a fancy word but the idea was to give a real court-like situation with two sides and people fighting a case in front of a judge. The event was a huge success and the last round was filled with excitement and rage.

Panel Discussion

Don't we all love the prime time (angry) guy? Well, he is hell of a guy and people all-over (off course including TVF) recognize him well. This event was nowhere close to what he does but the idea was similar. With free speech becoming a

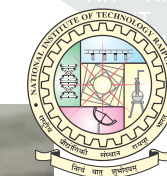
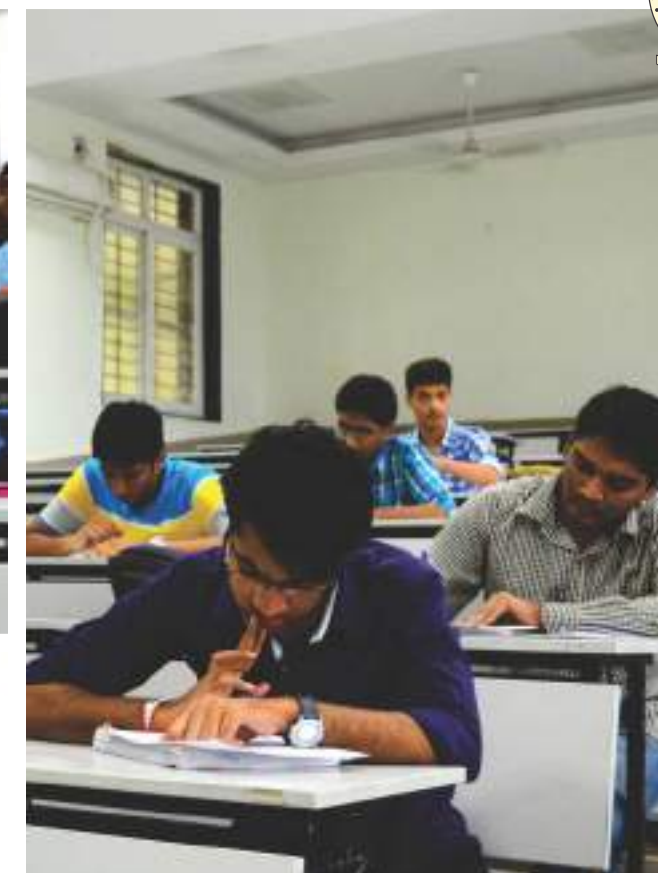


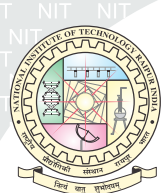


topic for discussion and conjuring all over the country, we decided to conduct this event. There were 5 panellists with one moderator. Participants loved this event and that made us love it too.

Spell Bee

Spell Bee was motivated from a Spelling Bee competition which is originally from America and is very famous around the world. It sounds simple when you think that you have to spell out a word but isn't so when you enter the competition. The event had two rounds with first one being a written test & second one a rapid fire quiz. This one too saw active participation from all over the state and was a big success for us





Nrityam The Dance Club

Report of session 2016-2017

Nrityam, the dance club of NIT Raipur started its journey on 21st Sep 2016. Presently Nrityam has members in the following categories:

- I. Choreographers
- II. Performers
- III. Managements
- IV. Media and Publicity
- V. Design and Editing
- VI. Sponsorship

Team Nrityam consists of 53 students

1. Events and Activity conducted till date:-

I. Team Nrityam successfully organized a Dance Showcase "Dance it out" on 29 april 2016 and celebrated "World Dance Day" in the present of faculty in charge Dr. Moksha Singh.

II. Team Nrityam performed in college campus during Aavartan (tech fest) before Bike stunt show

III. Team Nrityam performed in college campus on last day of Aavartan before tech show at main stage.

IV. Team Nrityam successfully conducted the event "Garba Evening" on 7th of oct 2016. The event was started by Dean Rajimwale sir by lighting the lamp and continued with dancing students on

folk songs. Ethnic and traditional dress code were maintained by the students. A large no. of students participated and made the event a great success.

V. Team Nrityam participated in Mood indigo 2016 , the cultural fest of IIT Bombay in various events. We represented CG folk dance there. The group that performed consists of 15 students.

VI. Team Head Coordinators Ratan Das and Anupama Bishnawat Selected for National Level Dance Camp "UIDC" among 1 lac dancers. The camp was free and all the facilities arranged by UIDC camp itself. They were taught by Bollywood Choreographers Terence Lewis, Remo D'Souza, Prince gupta, Alisha Singh, Shyam Yadav etc DID, IGT Fame stars.

VII. Anupama Bishnawat selected for the 2nd round of

CG's first reality show Dance Chhattisgarh Dance. She got 3rd prize at national dance competition "Impulse" and many more.

2. Events and Activities to be conducted

I. We will conduct Promotional dance performance for Samar 2017, the sports fest of NIT Raipur

II. Promotional Dance performance and choreography by us for Eclectika 2017, the cultural fest of NIT Raipur

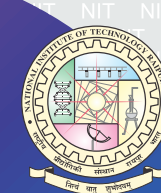
III. Proposal of "Dance Night", a colourful evening with beautiful dance and drama performances. Expected dates will be January last week.

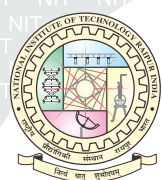
IV. Events will be organized during Eclectika 2017 on 3rd - 5th of march. The events are as follows

1) Team Nrityam will participate in inter college competitions at various colleges like IITs, NITs, BIT, HNLU, IIIT, IIM etc.

V. Dance practice will run for the whole year when ever students are available.

VI. We will conduct National and international leveled Dance workshops in coming semesters.





Sahyog

The mentorship Club

“Adore life with your tranquil effects and it will make this world serene”

Sahyog - The Mentorship Club had a journey hit on the asphalt road last session of 2015-16. With enduring efforts and an impulsive approach towards initiating a cultural spark in our esteemed college, bore fruits. The year was dynamic in many eventful occasions and the enthusiastic support from students (both members and non-members) turned our mission shaping a reality. Journey started with a team of undulating cent members, forming a blend of exotic skill sets and never ending enthusiasm. It was planned to extend our little efforts to make comfortable beginning of journey for talented first year students who faced lot of confusions during **admission process**. Team's effort and grateful help from sophomore made

our effort lucrative with its result, as an outcome **hostel database** in nearby area shaped and with that we can proudly pat our shoulders, we helped a good number of students getting hostel with their desire needs. Regular interaction sessions with our first year students by Team Sahyog members, mentors whose philosophical working ethics lies on **principle of – a guide, a friend and a philosopher**. We tried to bring solution of problems faced by first year students in settling in complete new environment, of course it is not easy for them to open up on first meeting but with spiraled arrangements and showing them unparalleled affection and belongingness towards institute and their welfare made us glide past their hesitation and help them fill the gap between them and their expectations from institute's ambiance.

Examination brings out the worst fear out of everyone but some of our fellow students feel more uncomfortable due to overdose of extradition they do for themselves and anxiety makes it more complicated for them. But in Sahyog we ought to make things look easy for the most shredded person and once again with the help of students from various different disciplines coming together and joining hands to eradicate the fear of ghostly exams. **Various subjects were taught** by our students (both members and non-members), helping the needy students with moral guiding and imparting concepts of technical engineering subjects at same time to make these students believe things are in reach if you try to catch it.

We invited students to write their answers to a question –

what engineering means to you? This question often comes in mind but real fun begins when you get an opportunity to press your mind nerves and write down your answer. A real fun event which made a talking point with the students and gave them a chance to express their feeling about engineering life. Ecstatic and eclectic at same time.

We work on a philosophy of spreading smile on the face of anime and with humane trust on believes, **we visited orphanages on World Smile Day**. We have seen people crying due to pain but healing them by helping them with our time and little efforts can broaden a peaceful smile on our face as well as we can see a shine of hope in their little unrested eyes also; donating stuffs and making their taste bud feel warmth of sweet chocolate made day for us.

We launched our **Logo and Tagline** last session. Mr. Praveen Chandrakar from Computer Science and Engineering Department emerged as winner of an online competition by our

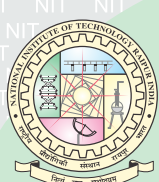


club for Logo Making and his design was selected amongst a large number of applicants. We came up with a tagline – **Helping Ourselves** which was suggested by Dr. Samir Bajpai (Professor, Civil Engineering Department) with a trailing philosophy in

his words, **“We are not doing something great, we are doing a part of activity which should be done”**. Indeed true, helping our alter ego is much resembling to helping ourselves.

A very new initiative by Team Sahyog to ignite the young minds and make them aware of various common things which are petite in nature but needs a strong intuition to learn. We invited students to be part of our most sought **“Awareness Week”**, a week long program hitting every genre of interest from psychological happiness, the consumer forum acts, setting up of startups, taxations, hand painting





and arts. Art of Living (Stress Management Session) by Mr. Mukesh Nihal and Dr. Anjali Verma where we discovered our old friend laughter can destress our life in a fraction of second. MSME (Micro, Small & Medium Enterprises);Entrepreneurs hip Skill Development Program and Benefits of MSME by Mr. D.C. Sharma, Asst. Director, MSME Raipur, we all believe in startup culture and this session proved fruitful for budding entrepreneur. Fire Safety & Management Session by Mr. Mishkat Hussai, JIFSA, Raipur. Consumer Rights Awareness Session by Mr. Mahendra Rathore, Registrar, District Forum. Taxation & Company Laws by Mr. Sachin Jain, FCA and Mr. Tushar Dey, FCA. Fine Arts & Hand Painting Competition by Mr. Sushil Sakhuja, Sculptor.

“To match the skills of programmers you need to behave like a programmer”, a seven day **programming workshop** with association of Programming Community, NIT Raipur



which focused entirely on enhancing the skills of budding programmer and planting a culture of programming in our campus.

For the very first time in NIT Raipur, students in such a large number knocked the doors of IIMs and Management institutes for winter and summer internships. With a session on “**How to make good Resume and hit the road of IIMs’ internship**” we saw a magnanimous turnout from students and they adieu a perfect response to that seminar and bagged internships in IIMs. To name few: Vishal Jodhani - IIM Ahmedabad, Udit Kumar - IIM Calcutta, Aman Shrivastava - IIM Raipur,

Anupam Karn - IIM Raipur, Nishita Verma - IIM Raipur and Maulik Nagaria - IRMA Gujarat.

Tradition of **blood donation** has sprouted very well in NIT Raipur and this year also we did **330 unit blood donations** on a single day to Dr. B.R. Ambedkar Model Blood Bank. We feel very obliged that we have such a huge number of enthusiast volunteers who gave their blood and time and made our event successful. It is a matter of fact that we have seamlessly moved to a new genre of silent noble helping through this unit of activity.

We approached to the end of session with mind storming **career counselling session** by our baked seniors who

showered their experience in their respective fields and tried to clarify the battling thoughts of choices available to initiate career for next crop of students. To name them - GRE: Mr. Krishna R Mithra Kruthiventi, IVth year, Information Technology (Member) and Mr. Rohit Mishra, IVth year, Mechanical (Non-Member), Special tips for appearing in Public Sector Units' exams: Mr. Siddharth Roy, Management Trainee, SAIL BSP. Metallurgical Engineering, 2015 Batch NIT Raipur (Member 2014-15 Team Sahyog), GATE: Mr. Shubham Agarwal, IVth year, Mechanical (Non-Member);



Mr. Romendra Pratap, IVth year, Civil (Non-Member);Mr. De Vivek, IVth year, Metallurgical (Non-Member), for Placement (Analytics Sector):Mr. Mukul Garg, IVth year, Civil (Non-Member); Mr. Md. Aqueeb, IVth year, Electronics & Telecommunication (Non-Member), for Placement (Core): Mr. Himanshu Wadhwani, IVth year, Mining (Member) and Mr. Tarun Kaushik, IVth year, Mechanical (Member), for Placement (Software):Mr. Rahul Borker, IVth year, Computer Science & Engineering (Non-Member), for CAT: Mr. Rajat Vardiyani, IVth year, Mechanical (Non-Member) and Stress Free Engineering Tips: Mr. Tarun Kaushik, IVth year, Mechanical (Member) and Ms. Shubhrita Tiwari, IVth year, Electronics & Telecommunication (Non-Member).

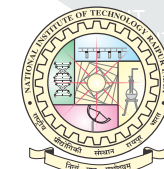
We joined hands with **Go-Green Committee of NIT Raipur** to organize a book donation camp, there we have tried to spark the plug of reusing the old books by passing it to the new

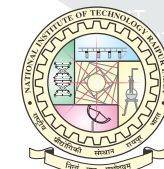
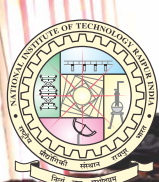
students and hence following that in continuum.

We believe that we are on a mission where our passion drives an adrenaline in our veins to build a strong culture where every opportunity looks possible and every eye carries a hope of getting help on the door. We are not altruist but we are an opportunity to scale every possibility to bring smile on face by helping a bit needed and a bit demanded. We hope you will always support us in our endeavor and we promise to deliver everything expected from us. Under the spirited guidance and motivation of Dr. Ravi K. Jade (Professor-In-Charge Sahyog - The Mentorship Club) this movement is trying to make college lives better.

“My passion makes me stronger, holding your hand reinforces it harder, I believe there is help, just need to call it louder”

- Team Sahyog-The Mentorship Club





Team Shaurya

SAMAR- A Season in Itself

Team SHAURYA stands proudly as the Sports Committee of N.I.T. Raipur organising its Sports Fest named "SAMAR" every year. SHAURYA first organised SAMAR in the year 2008 and has endeavoured to make it better with every passing year. SAMAR consists of Thirteen Inter-branch games and Six Inter-college games which includes both indoor and outdoor events. SAMAR flaunts the position of being Central India's Largest Sports Fest in which all the more than 20 colleges take part.

Team Shaurya also organised many fun events like Dodge Ball, Tug of War and Nukkad Natak before the Sports fest which saw a huge participation from students of every branches of our college.

Games organised in SAMAR – Cricket, Football, Handball, Badminton, Basketball, Hockey, Volleyball, Kabaddi,

Kho-Kho, Athletics, Chess, Table Tennis, Carrom.

SAMAR 2016 was a season flavoured with good competition and heightened spirits. Eminent Sports personalities did the kind honour of gracing us with their presence as chief guests in SAMAR 2016.

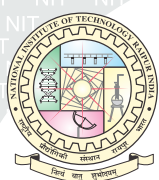
Also, a Karate Competition was also organised on the last day of SAMAR'16.

SAMAR 2016 saw vibrancy in motion with its first event-a Marathon organised on 15th August 2015 which was followed by showcasing the trailer of SAMAR 2016 at the closing ceremony of the Tech Fest. The marathon had the boys run three rounds of the college campus and two rounds of college campus for the girls. Fun events like Tug of war and Dodgeball followed next which were organised on Engineer's day. These fun events also served as promotional events for

they gathered a lot of crowd and intrigued people from all branches. There were more than a hundred teams participating in these events with each team comprising of 3 boys and 2 girls. Biomedical branch stood as the winning team and civil engineering branch bagged the runner up position. SAMAR 2016 hosted many inter-college events like Cricket, Volleyball, Basketball, football and table tennis for boys and two inter-college games for girls.

NIT Raipur saw many students bringing laurels to the institute by securing the following positions in the Inter-NIT :-

1. Hockey- 3rd position
2. Kho-Kho-3rd position
3. Handball-2nd position
4. Chess-6th position (boys)
5. Chess-3rd position (girls)
6. Table tennis- qualified Semi finals (girls)



This year, Team Shaurya has decided to add a Social Cause to its fest aiming to render 'good to the world' parallel to the excitement wrapped events and thus finalising "UNNATI" as upcoming SAMAR's theme.

UNNATI strives to bring about Women Empowerment through Self-defence and Sports. In this noble cause, we are being supported by MARD- Men against Rape and Discrimination, an initiative by Farhan Akhtar and many other esteemed organisations.

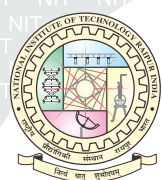
Team Shaurya has been organising various online contests on Facebook to create awareness among people about sensitive issues which need to be brought under the limelight and worked upon for betterment and upliftment of women.

SAMAR 2017 will see many thrilling events unlike last year. **It is irrefragably a festival not to miss.**

With Regards,

TEAM SHAURYA 2016-17





the technoCracy

Annual Report

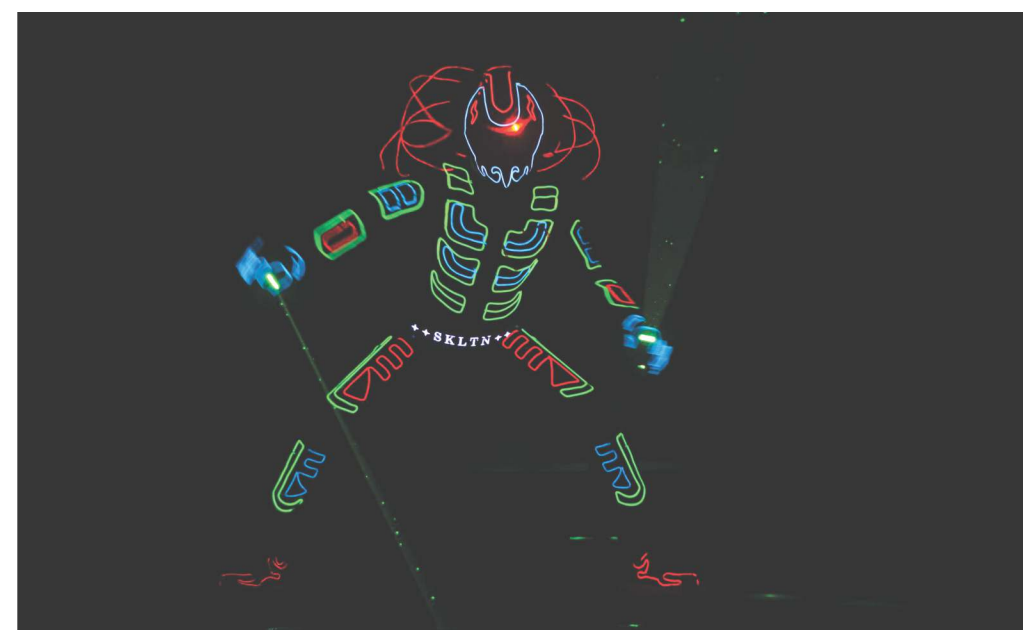
The TechnoCracy is the students' technical committee of NIT Raipur. It was a seed sown in 2007 by a few technical enthusiasts, which has grown and established its strong roots. Currently, it comprises of over 100 members. The vision of TechnoCracy is to bring out the technical thirst in every student through their innovative ideas and help them discover the concealed, untapped avenues of science and technology.

The TechnoCracy remains active throughout the year and conducts various workshops like on robotics, IOT (Internet Of Things), seminars by eminent personalities and guest lectures by alumni. The TechnoCracy is known to organize the Annual Science and Technical Festival of NIT Raipur; "AAVARTAN" which is the largest tech-fest of central India, by all standards. The main aim of

AAVARTAN is to provide a national level platform for students to showcase their technical flair. It aspires to bring out the hidden and dormant engineer inside each student. It inspires students and gives them a whole new and enriching perspective in the world of technology and entrepreneurship. Aavartan'15 conducted competitions and events in both technical and management fields. It included mega campus events like RoboWars, October Sky, Maze-Runner, Diabolic Dumper, Sherlock Holmes; online events like Kleos, Sportica and many more. It also organized the National Science Exhibition- "Vigyaan" which attracted a huge participation from the student community. Vigyaan is the National level scientific and technical exhibition which constitutes of models and innovations

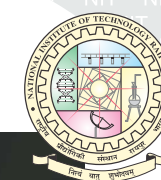
which address the different contemporary problems faced by the society. It gives a platform to the students to give shape to their solutions regarding various issues that are affecting the mankind.

TechnoCracy with each passing year is striving hard to take up Aavartan to new unimaginable heights. TechnoCracy also sees itself as a socially responsible entity by encouraging and undertaking various social causes every year under the aegis of AAVARTAN and this time around it is "Cyber Security". Aavartan'16 ascends with the theme of "Into the Space" to unveil the fascinating information lurking in the infinite space. Aavartan'16 is the 10th edition of AAVARTAN and is planned to be bigger and better with a new spin to things already done and something never imagined before. This year, The Technocracy has taken the



initiative to start two clubs – Aero-modelling club, which would be an inter-disciplinary club aimed at exploring the heights in the same field and TEDx community, which would aim at providing an international platform to the indigenous ideas.

Since its inception, The TechnoCracy has been working on providing the pathways to young minds to model their fascinations into reality and this year, The Technocracy will be delivering even more!





Shruti



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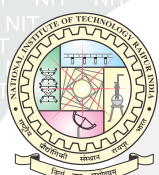


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Shruti



Team Media Cell



Team Media Cell, NIT Raipur has sincerely covered the fests and the events of the college in the year 2016 to establish a link between the college and the commoners. The committee successfully promoted the college events as well as the club and committee activities, and helped driving the name of our college even higher.

The team started its work with the Go Green Ganesha, an event of We care- The Green Movement, NITRR which was an open participation for several schools and other collages too. The other events of the club; Bag O Mania, Best Out Of Waste, Painting competition etc conducted under Swachhta Pakhwada were also covered sincerely that aimed to spread awareness among the people our need and responsibility to keep the surroundings clean. The team also took an interview of the Green Committee projecting out their motto, discussing their

recent steps and enquiring about their further plans.

The first Entrepreneurship fest, E- Summit, was also promoted profound in our reports. From the speaker sessions to B-Quiz everything was covered. A short interview of Mr. Praveen Sambani (Advisory Member, Ernst & Young LLP, CHIPS) was also taken.

In Aavartan, The Technical Fest NITRR, starting from the inauguration ceremony to the games like Laser Tag and other competitions like Wall Street, Robo War, Rural India etc; the technical events like diabolic dumper the adventurous events and the great Tech Show and Bike stunt all were covered minutely. Vigyaan- The national science exhibition, where we saw active participants from more than hundreds of colleges occupied eminent section in the esteemed dailies.

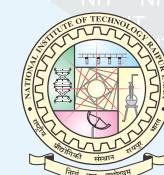
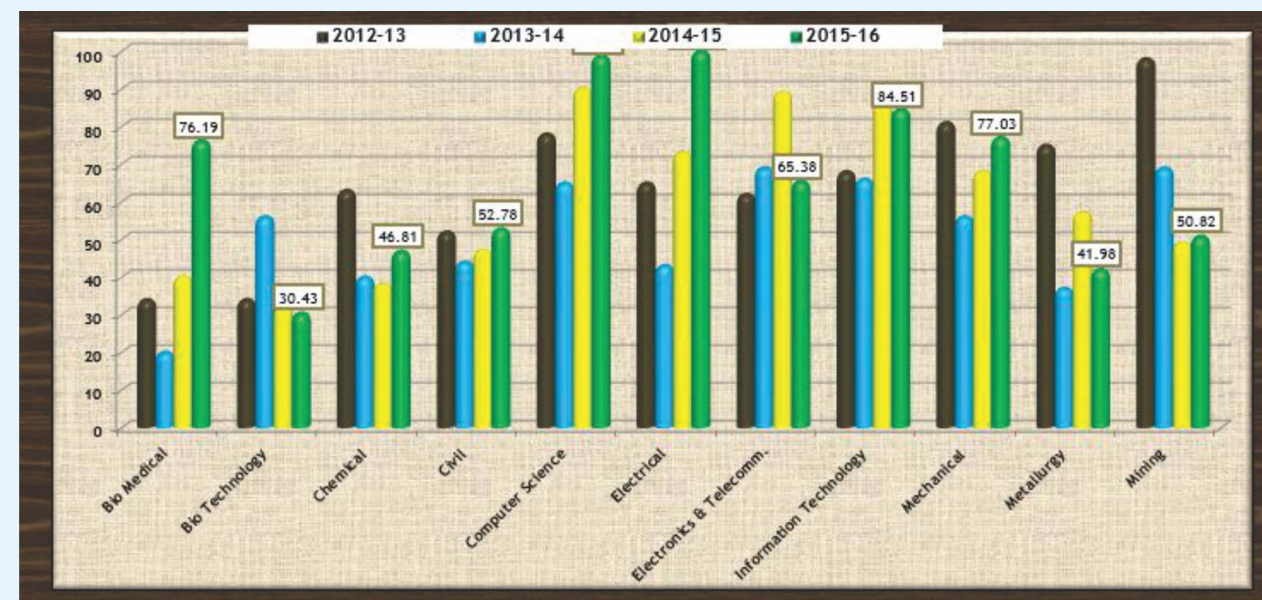
The Musical Night, Shruti conducted by the Cultural Committee, NITRR was also

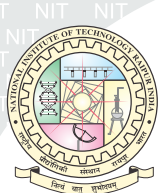
covered thoroughly where the participants mesmerised the audience with their marvellous voice and beats. The other events of the committee like the Traditional Day, Mehendi Art etc which were a part of the pre Diwali celebration were also delineated.

Along with this Nukkad performed by the Dramatics Club, NITRR and the Cultural Committee; the fun events and DJ evening conducted by Shaurya-The Sports Committee, NITRR ; essay writing, treasure hunt etc conducted by Literati-The Literary Committee, NITRR and the Garba Night organised by the newly established dance club Nrityam were also covered

The team has sincerely tried to capture each and every event being organised in the college and establish a bridge between the college and the outer world and is always ready with the camera, pen and mike for the upcoming ones.

Training and Placement Statistics

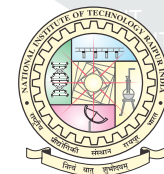




CHEMICAL DEPARTMENT

Activities

CHEANIT is a committee aiming towards developing and strengthening interaction among the students and faculties of Chemical Engineering department. Moving forward in this direction, CHEANIT has successfully organised events like Group Discussions and Technical Quiz on 25th October 2016 involving huge participation from the students. The topic for the Group Discussion was 'Should India have American style presidential debates'. The chief guest cum judge for the event was respected Dr. Moksha Singh of the Humanities department. Technical Quiz was another much awaited event involving audio-visual questionnaire covering important topics of Fluid Mechanics, Heat Transfer, Chemistry etc



ELECTRICAL DEPARTMENT

Activities

WORKSHOP ON PCB AND ANALOG CIRCUIT DESIGNING

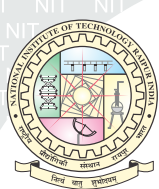
This Workshop was organised by IEEE Student Branch NIT Raipur in association with EDUCAMP. The Workshop was a Two days , 16 hours



hands-on workshop. The First day stressed on the basics of PCB designing, the hardware and software involved, the upcoming technologies in this field, Using EAGLE software for designing the PCB, the tools used for designing etc. It also included the designing of schematic of various circuits like Flip-Flop, Analog Filter, JFET/BJT etc.

The Second day stressed on the hardware implementation of the schematics produced in the previous day. Soldering and De-soldering Techniques and different methods of soldering were on main focus. Further basics of Breadboard layout, converting the schematic to PCB layout, checking error in layout were also taught. Also a brief introduction on how to convert the PCB layout in zero PCB to final product using etching technique was given.

A certificate of Participation was given to all the participants and a take away



kit was given to a group of 5 participants. Thus, it was a comprehensive 2 Day, 16 hour workshop dedicated to make the base of college students in the field of PCB designing so that they can make future projects in this field independently.

WORKSHOP ON INTERNET OF THINGS

Workshop on IOT was conducted by IEEE Student Branch NIT Raipur in association with TECHINEX-IIT BHU. IOT is a global network Infrastructure linking physical and virtual

objects using cloud computing, data capture and network communications. It allows devices to communicate with each other, access information on the Internet, store, retrieve data and interact with users.

The 1st Day focused on basic concept clearing and building base for doing practical applications. Basics on IOT, Arduino, Microcontroller, Sensor etc were explained in detail. Simple Programs like Interfacing LED, I.R Sensor etc. with arduino were done. The 2nd day stressed on doing interesting projects like:

- Creating own Android App using MIT App inventor, and

controlling Arduino connected devices.

- Being Social on Twitter and updating status on twitter through Arduino.

- Making electronics gadget talk to internet.

- Sending voltage and analog data on Cloud Server.

Certificate of Participation was given to all the Participants and a take away kit was given to each team having 4 members. Thus the Workshop was aimed to building the base of students in the field of IOT and enable them to make better projects in future.

MECHANICAL DEPARTMENT

Activities

Students of mechanical dept. participated in **QUAD-TORC** '16 securing **4th** position across India. Team

ACELERAR comprising of 40 members guided by Dr. Shubhankar Bhowmick and led by Kalyan Singh have set new standards for upcoming automotive events.

What is QUAD-TORC ?

QUAD-TORC is "QUAD-The Off Road Championship". Quad is an All-Terrain Vehicle

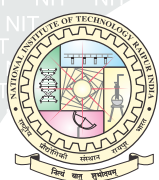
(ATV), a four wheeler bike, which was initially developed for a farm to town vehicle in isolated and mountainous regions. This competition was basically to design and fabricate a QUAD bike. This event was organised by Indian Society of New Era Engineers (ISNEE). It is an organisation focusing on the technical and managerial development of future engineers. It gives opportunity to research and develop innovative projects.

SUCCESS RECIPE

An integrated knowledge and practical input of members for months and around 5 lacs of capital made us celebrate the rise of ATV DARK PHOENIX. Success comes to those who work for it. Eventually, Dark phoenix flew high in its first flight! The taste of success was much sweeter than the pain of hard work.

Inauguration Ceremony of DARK PHOENIX





METALLURGY DEPARTMENT

Activities

1) Department of Metallurgical Engg. NIT Raipur conducted Two days workshop on **Industrial Experimentations** under TEQIP-II Programme, from September 4th- 5th 2015.

Key Speakers-

Dr. Prasun Das, Indian Statistical Institute, Kolkata

Prof. Sugata Adhikari, Indian Statistical Institute, Kolkata

Lectures-

Prof. Sugata Adhikari –



Basic Concepts of Design and Analysis of Experiments,

Statistical Preliminaries : Comparing Unknown Quantities : An Insight into Basic Statistical Concepts

Factorial Experiments

Basic Concepts of Taguchi Methods

Dr. Prasun Das -

Introduction to Design and



Analysis of Experiments

Multi- Response Decision Making.

Coordinators- Dr. Subhas



Ganguly and Dr. Manoj Kumar Chopkar, Dept. of Metallurgical Engg., NIT Raipur.

2) Department of Metallurgical Engg. NIT Raipur conducted Two days workshop on **Advanced Techniques in Materials characterization** under TEQIP-II Programme, from January 22nd-23rd 2016.

Key speakers-

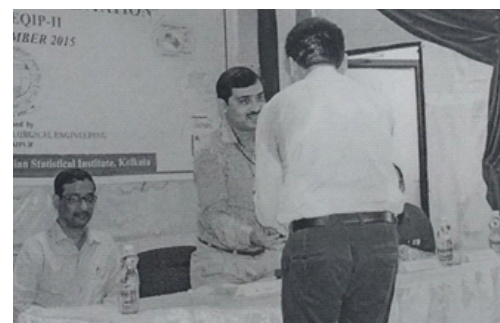
Dr. Joydip Jordar (ARCI Hyderabad)

Dr. Somnath Bhattacharya (IIT Madras)

Dr. Mallar Ray (IIST Shibpur)

Dr. Snehanshu Pal (NIT Rourkela)

Coordinators- Dr. Sudip Kumar Sinha and Dr. Manoj



Kumar Chopkar, Dept. of Metallurgical Engg., NIT Raipur.

3) Department of Metallurgical Engg. NIT Raipur conducted Two days workshop on **Emerging trends in Material research-** a National Perspective under TEQIP-II Programme, from September 23rd-24th 2016.

Key speakers-

T. A. Abhinandan, IISC Bangalore (Computational Modelling of Microstructural Evolution.)

Dr. Debalay Chakrabarti, IIT Kharagpur (Microstructure-Texture-Mechanical Property

relation in steel

Dr. Amritendu Roy, IIT Bhubaneswar (First-principles studies in materials using Density Function Theory)

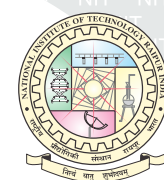
Dr. Partha Sarathi Dey, IIT Bhubaneswar (Experiments and Modelling studies on Dynamic Recrystallisation in a non heat treatable Al alloy)

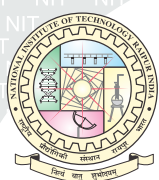
Dr. Somnath Bhattacharya, NIT Raipur (Introduction to FEM in Material Science)

Who attended workshop-

Final and Pre-final year UG/PG students, Research Scholars and faculty Members, Industry peoples, with background in Metallurgical, Ceramics, Mechanical, and Chemical Engg. And also basic sciences (Physics, Chemistry and Bioscience etc)

Coordinators- Dr. Sudip Kumar Sinha and Dr. Subhas Ganguly, Dept. of Metallurgical Engg., NIT Raipur.





ELECTRICAL DEPARTMENT

IEEE Activities

PCB

The Workshop was a Two days, 16 hours hands-on workshop. The First day stressed on the basics of PCB designing, the hardware and software involved, the upcoming technologies in this field, Using EAGLE software for designing the PCB, the tools used for designing etc. It also included the designing of schematic of various circuits like Flip-Flop, Analog Filter, JFET/BJT etc.

The Second day stressed on the hardware implementation of the schematics produced in the previous day. Soldering and De-soldering Techniques and different methods of soldering were on main focus. Further basics of Breadboard layout, Converting the schematic to PCB layout, checking error in layout were also taught. Also a brief introduction on how to convert the PCB layout in zero PCB to final product using etching technique was given.

A certificate of Participation was given to all the participants and a take away kit was given to a group of 5 participants.

Thus It was a comprehensive 2 Day, 16 hour workshop dedicated to make the base of College students in the field of PCB designing so that they can make future projects in this field independently..

IOT

A Workshop on IOT was conducted by IEEE Student Branch NIT Raipur in association with TECHINEX-IIT BHU. IOT is a global network Infrastructure linking physical and virtual objects using cloud computing, data capture and network communications. It allows devices to communicate with each other, access information on the Internet, store, retrieve data and interact with users.

Basics on IOT, Arduino, Microcontroller, Sensor etc were explained in detail. Simple Programs like Interfacing LED, I.R Sensor etc. with Arduino were done.

Creating own Android App using MIT App inventor, and controlling Arduino connected devices.

Being Social on Twitter and updating status on twitter



through Arduino.

Making electronics gadget talk to internet.

Sending voltage and analog data on Cloud Server.

Certificate of Participation was given to all the Participants and a take away kit was given to each team having 4

members. Thus the Workshop was aimed to building the base of students in the field of IOT and enable them to make better projects in future.

Virtual Labs

A workshop on virtual labs was organised by IEEE Student Branch, NIT Raipur on 14th and 15th January, 2017, in collaboration with IIT Roorkee. The event saw a mass participation of about 400 students.

Virtual Labs is a venture of Ministry of Human Resource Development (MHRD), Govt. of India, under its National Mission on Education, through Information and Communication Technology (NMEICT). This project is initiated with a motive of

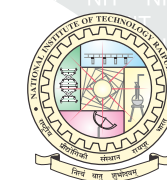
improving standards of laboratory and practical training imparted to Engineering and Science students in India. The state of art laboratory facility in all discipline of Engineering and Science education is developed in few institutions. This laboratory facility is then virtualised by using internet and other related technologies.

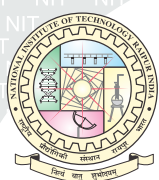
IIT Roorkee has developed following virtual labs under NMEICT :

- Electric Machines
- Civil Surveying
- Digital signal processing
- These virtual labs are made available on a common portal, <http://www.vlab.co.in/>. Students can access lab of their choice and perform experiments at a

convenient time slot. They can also repeat experiment as many times as they wish. The experimentation and learning process is further strengthened by detailed instructions, theory and analysis given with each experiment.

The workshop is absolutely free of cost for young and aspiring Engineers and related discipline students. They will be able to use the technology to its best, for operating various lab appliances virtually from a great distance. The workshop will prove to be absolutely beneficial for the students from future point of view.



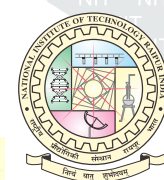


Industrial Automation

This workshop will be organised by SMEC Labs, an integrator of Schneider Electric. It will be of 5 days duration. SMEC Labs is a leader in Industrial Automation.

Industrial automation is the use of control systems, such as computers or robots, and information technologies for handling different processes and machineries in an industry to replace a human being. It is the second step beyond mechanization in the scope of industrialization. Industrial automation

facilitates to increase the product quality, reliability and production rate while reducing production and design cost by adopting new, innovative and integrated technologies and services. Automation devices include PLCs, PCs, PACs, etc. and technologies include various industrial communication systems.



VIGILANCE AWARENESS WEEK

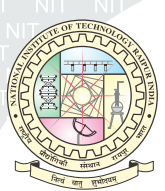
Keeping in foresight the profound impact a vigilant citizen can create to society NIT Raipur in association with Mini Ratna Company SECL on advice of Central Vigilance Commission(CVC) celebrated Vigilance Awareness Week.

Essay writing competition

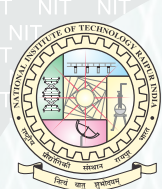
and Debate competition were held in premises on 25 october and 26 october respectively. Topics revolved around the theme "Public participation in promoting Integrity and removal of Corruption". Winners were felicitated with handsome prize money and Certificates.

Emphasis was given on "Preventive Vigilance" instead of "Punitive Vigilance" along with inculcating this culture among NITians. The episode initiated proactive measures and impacted students and society as a whole to mitigate the menace of corruption.





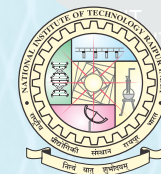
DEPARTMENTS



BIOTECHNOLOGY



CHEMICAL

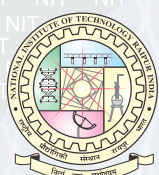


CHEMISTRY



CIVIL

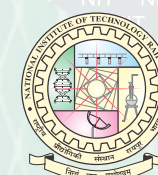




COMPUTER SCIENCE



M.TECH MECHANICAL

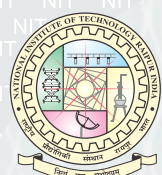


ELECTRONICS

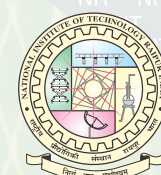


HUMANITIES





INFORMATION TECHNOLOGY



MECHANICAL

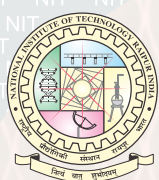


M.TECH APPLIED GEOLOGY

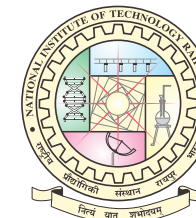


MATHEMATICS





TRAINING AND PLACEMENT OFFICE

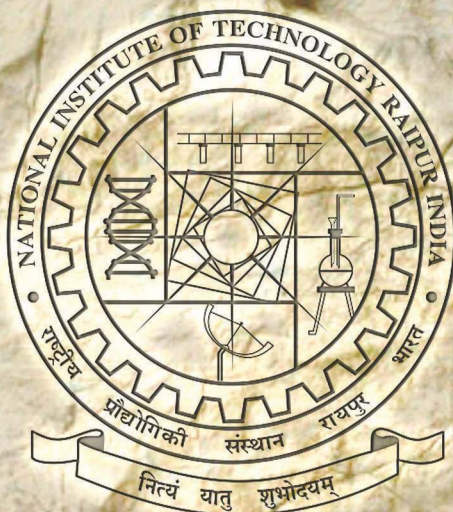


TEAM
Literati

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Overall Management -
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Shilpi
2016

National Institute of Technology, Raipur