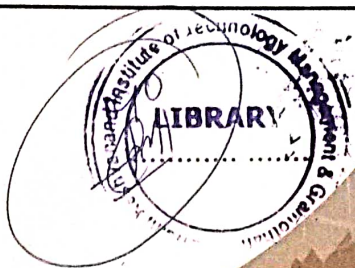


A QUARTERLY BULLETIN OF



SWAMI KESHVANAND INSTITUTE
OF TECHNOLOGY, MANAGEMENT
& GRAMOTHAN

THE SKIT TIMES

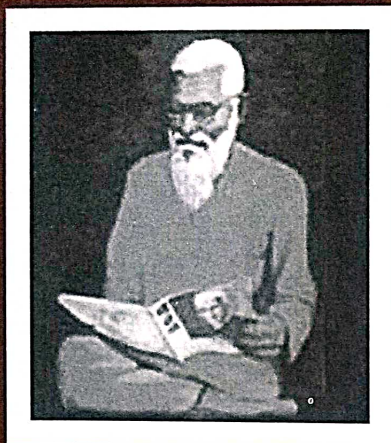


ISSUE 28

AUTUMN 2013

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OUR MENTOR & PATH FINDER



Swami Keshvanand Ji
(1883 - 1972)

VISION

To promote quality education, training and research in the field of engineering by establishing effective interface with industry and to encourage faculty to undertake industry sponsored projects for students.

MISSION

To promote higher learning in advanced technology and industrial research to make our country a global player.

DISCLAIMER

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EDITORIAL

Dear Readers

I am elated to present the autumn issue of THE SKIT TIMES. Prof. Banthiya's article has propelled me to ponder over our educational system which I feel needs to undergo a paradigm shift in its emphasis on the philosophy of education. At present, it doggedly holds on to the behaviouristic approach to learning as against the humanistic approach. The behaviouristic approach assumes that individuals have no free will and that an individual's environment decides his behaviour. On the other hand, humanistic approach emphasizes the personal growth of the individual. It argues that human beings are capable of thought and reason. The system needs to believe in the individuality of every student and to help each child deal with the vicissitudes of life. The education system needs to enable a child to deal effectively with its environment, discern the available opportunities and deal with the challenges of society. To enable these behavioural transformations, the system needs to enrich the curriculum with a highly researched and effective life skills training programme. UNICEF lists ten life skills as most important under the domain of psychological and interpersonal skills. These are problem solving skills, critical thinking skills, effective communication skills, decision making, creative thinking, interpersonal relationship skills, self-awareness building skills, empathy and coping with stress and emotions. Hence promoting an efficient life skills training programme would be an ode to the youth in the country. It would be a means of men holding them through the critical stages in their life and helping them tap their potential to the fullest.

Let us join our hands to train our students in life skills.

Dr. Niraja Saraswat
Editor-in -chief



CAMPUS VIBES

ORIENTATION OF B. TECH. I YEAR STUDENTS



On 1 August 2013, the SKIT family organized an orientation ceremony to welcome the new members to its family. Though the official ceremony began at 10 a.m., the senior students started the programme with cultural performances much earlier. There were mesmerizing performances by the Sarhad band. The ceremony commenced with the lighting of lamps and saraswati vandana to invoke the blessings of the Almighty. This was followed by the felicitation and floral welcome of the esteemed chief guest Prof. R. P. Yadav, Vice Chancellor, Rajasthan Technical University.

Shri Surja Ram Meel, Chairman, SKIT delivered the welcome address wherein he laid emphasis on a disciplined life and encouraged the students to utilize the four years at college to their fullest by becoming not only technically sound but also good human beings. He also welcomed the parents, asked them to keep a vigil on their ward and assured them that SKIT will leave no stone unturned to justify the faith reposed in it.

Mr. Jaipal Meel, Director, SKIT introduced SKIT to all the parents. He spoke about the infrastructure facilities and the functioning of clubs and forums for the all round development of the students. He also acquainted the parents with the ERP system through which the students' progress can be checked online.

Prof. (Dr.) S. L. Surana, Director (Academics) shared the vision and

mission of SKIT with the new students. He described the principles of discipline and regularity as the basic tenets of SKIT. He also asked the students to put their holistic devotion to studies as well as extracurricular activities with equal vigour.

While addressing the gathering, Prof. R. P. Yadav, Vice Chancellor, Rajasthan Technical University, first congratulated the parents and the students for the selection of the college. He said that an engineer plays a pivotal role in the development of the nation and emphasized the importance of becoming industry ready by developing the requisite skills and knowledge. He laid emphasis on honesty, integrity and hard work to be successful in life. He asked the students to grab the opportunities and to inculcate leadership skills to be successful in life. He also exhorted the faculty members to be updated with the recent developments as a child is even exposed to the latest information these days. Dr. S. K. Calla, Principal, SKIT proposed a vote of thanks.

The second half of the session was marked by an enlightening speech by Dr. Satish K. Batra, an acclaimed academician. He kept the audience spell bound with his talk on positive appearance, happiness and satisfaction which can bring a profound change in life. He peppered his speech with stories and anecdotes and encouraged the students to strive for the goal, to have noble ideas and a purpose in life. With his invigorating speech the ceremony came to an end.

NATIONAL CONFERENCE ON FUTURE DIRECTIONS IN THERMAL ENGINEERING (NCFDTE)

The Dept. of Mechanical engineering organized a one day National Conference on Future Directions in Thermal Engineering on May 11, 2013. Various eminent personalities from all over India attended the conference and expressed their views on the topic. Mr. L. R. Saini (ISO Auditor) was the Chief Guest of the inaugural session. Dr. P.K. Khanna (Chief Scientist, Hybrid Micro Circuits Group), Dr. Dilip Sharma (Associate Professor, MNIT, Jaipur), Dr. G. D. Agarwal (Associate Professor, MNIT, Jaipur) and Dr. N. K. Banthiya (Professor & HOD, Dept. of Mech. Engg., SKIT, Jaipur) delivered the keynote addresses related to thermal engineering issues.



Col. J. L. Sehgal (Ex-Chairman, Institution of Engineers Rajasthan State Centre) was awarded Lifetime Achievement Award by Mr. Jaipal Meel (Director, SKIT). During the Conference, 39 research papers were presented, out of which 21 papers were from the faculty and students of SKIT, and 18 were from other participating institutes. The conference also witnessed the invited speakers as Prof. (Dr.) S. L. Surana, Director (Academics) and Dr. S.K. Bhatnagar, Professor and Dept. of HOD ECE from SKIT, Jaipur. Dr. Surana spoke on Recent Advances in Heat Storage and Transfer Technology. Prof. Alok Mathur coordinated the conference successfully. The conference certainly served as a platform to foster professional and personal growth of the students through interaction with the leading personalities of the field.

BLOOD DONATION CAMP

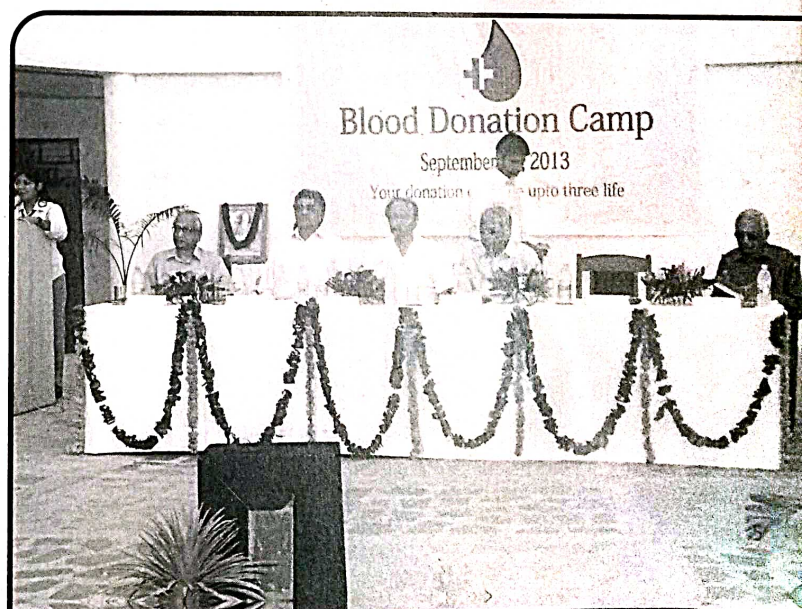
SKITIANS have always put in their endeavours for community service. In the same spirit, a voluntary blood donation camp was organized for another consecutive year on 28 September 2013. It was held in collaboration with Lions Club, Youth Redcross club, SMS Blood Bank, Santokba Durlabhji Memorial Hospital, Jaipur and Rotary club, Jaipur, Bapu Nagar.

The inaugural function witnessed the gracious presence of Mr. Raja Babu Panwar, Vice Chancellor, Rajasthan Health University as the chief guest and Mr. Suresh Chaudhary, DGP Police and Home guards and Dr. D. S. Malik, Surgeon, Metro Manas Arogya Sadan Hospital as the guests of honour, Mr. Jaipal Meel, Director, SKIT, Prof. (Dr.) S. L. Surana, Director (Academics). The programme commenced with a welcome address by Mr. Jaipal Meel. He welcomed the dignitaries and congratulated the donors for the noble cause.

Prof. (Dr.) S. L. Surana threw more light on the objectives and scope of the camp. He asserted that due to the widespread outbreak of Dengue, the camp has been organized prior to the due date. He lauded the efforts of the SKIT family and exhorted students and faculty members to donate more blood. Mr. Suresh Chaudhary conveyed his greetings on the occasion and wished for grand success of the programme.

Dr. Malik extended his congratulations to the donors. He explained all the myths which are associated with blood donation. He explained that one blood donation can save three lives. The chief

guest, Mr. Raja Babu Panwar, compared blood donation to the highest donation in the world. He also expressed that the engineers and doctors are interdependent. Innovation of technocrats helps doctors to alleviate several problems. He invited the audience to take up problems as small projects and come up with the innovative solutions of every problem. Prof. (Dr.) N. K. Banthiya, Head, Dept. of Mechanical Engineering proposed a vote of thanks to the dignitaries and also congratulated Mr. Ankush Tandon, Sr. Lecturer, Dept. of Electrical Engineering for successfully organizing the programme. He also espoused the need of eye donation and organ donation. The camp concluded with honouring the guests with a shawl and memento and distribution of gifts to the blood donors.



INDEPENDENCE DAY CELEBRATIONS

Independence Day was observed in an ambience redolent with love and respect for the nation. The celebration began with tricolour hoisting ceremony by the dignitaries.

Mr. Anil Bafna, Vice Chairman, SKIT, extended his greetings to all and exhorted everyone to love our motherland. He stressed the need of a strong character, confidence and compassion to shape our nation.

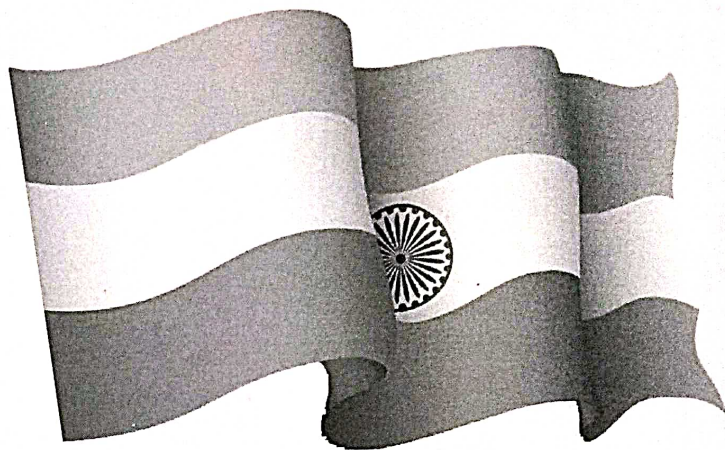
Prof. (Dr.) S.L. Surana, Director (Academics), SKIT, expressed his views on the importance of discipline. He asked the audience to look into their hearts and steer clear of the distractions coming in their paths.

Prof. (Dr.) M. Raisinghani, Director (Academics), VIT, said that total development is the need of the hour. He left everyone mesmerised with his songs filled with hope and patriotism.

Dr. S.K. Calla, Principal, SKIT, highlighted the solutions to the various problems facing India and urged the students to think for the country.

Prof. (Dr.) N. K. Banthiya, Head, Dept. of ME, SKIT, talked about the many sacrifices of Mahatma Gandhi. He wished that every Indian should rise above social evils and superstitions. He also highlighted the importance of empathy in our behaviour.

To encourage quality research work amongst the faculty members, certificates and cash awards were conferred on those who had done it : This year the recipients of the award included. Mr. Mukesh Arora

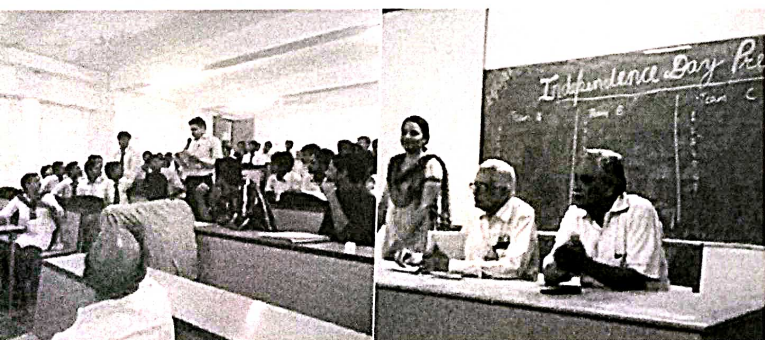


(Reader, Dept. of ECE), Ms. Shubhi Jain (Lecturer, Dept. of ECE), Mrs. Monika Mathur (Reader, Dept. of ECE), Dr. S.K. Bhatnagar (Head, Dept. of ECE), Dr. Niraja Saraswat (Reader, Dept. of English), Dr. Nidhi Sharma (Reader, Dept. of English), Mr. Sarfaraz Nawaz (Reader, Dept. of EE), Mr. Pankaj Dadheech (Reader, Dept. of CSE), Mr. Brajraj Sharma (Senior Lecturer, Dept. of Physics). Also four students of ASME Student Section were honoured for securing third rank at KLU University, Andhra Pradesh.

The celebrations culminated in a cultural programme put up by students which included drama, poetry and musical performances. The students of Dramatics Club performed a skit 'PANI DA RANG' which depicted the ideologies of politicians, rich and powerful people. The play inspired the Indian citizens to contribute more for the development of the nation.

The programme ended with distribution of sweets to all.

INDEPENDENCE DAY PRE-TALKS



Independence Day Pre-talks were organized in the Mechanical Engineering Department from 12 to 14 August 2013. The event, coordinated by Mr. Dheeraj Joshi, Reader, Dept. of ME cherished young and enthusiastic students taking part in the quiz which was based on freedom struggle of India and related issues. Participants deserve congratulations for their excellent performance and competitiveness. The experiences and comments by Prof. (Dr.) N.K. Banthiya about various historical events made the programme lively and a real success. Batch counselors and other faculty members were also present during the talks.

ENTREPRENEURSHIP DEVELOPMENT CERTIFICATION PROGRAMME – INNOVA 2013 CONDUCTED BY SKIT'S E-CELL TOPAZ

TOPAZ, the E-Cell of SKIT, launched an 11-day entrepreneurship development certification programme (EDCP-2013) named INNOVA on 30 August, 2013.

INNOVA was an attempt to provide entrepreneurship development services in a more organised fashion for our students and E-leaders in a bid to enhance their capabilities and broaden their growth. This initiative was one of the most innovative approaches aimed at better learning.

The first day witnessed the gracious presence of Mr. R.P. Kashyap, Head, CII Rajasthan as the chief guest, Ms Preeti Singh, Head, NEN, Rajasthan Chapter and Mr. Sharad Kamra, TiE Co-ordinator, as guests of honour.

Mr. R. P. Kashyap spoke on the importance of pursuing entrepreneurship. He advised all the students to continue challenging themselves. He asked them to follow a mantra of their

own to reach where they aspired to go.

Ms. Preeti Singh spoke about the various challenges that lie ahead in the path of an entrepreneur and how to overcome these challenges. She motivated and congratulated team TOPAZ for undertaking this initiative.

Prof. M. L. Bhargava, Advisor, SKIT highlighted the characteristics of any successful entrepreneur like risk taking, optimism, innovation, leadership, flexibility, etc.

Ms. Maneesha Kaushik, faculty Head, EDC, SKIT, spoke about the economic trends and asked the students to be more enterprising. She asked the students to inculcate the necessary skills to keep pace in the competitive global scenario.

The second day aimed at highlighting the growth and sustainability in a competitive environment. Case studies on young entrepreneurs were also carried out.

The third day was devoted to Idea Generation. It was aimed at bringing out the creativity and productivity of the students. They also learned the technicalities of value chain analysis.

The fourth day aimed at opportunity evaluation in which the students were groomed to bridge the gap between a product and an opportunity. They were also asked to focus on the mission of wealth maximisation rather than profit maximisation.

Mr. Chintan Bakshi, an incubator in association with RIICO, was the chief guest for the fourth day. A graduate from the Indian Institute of Technology, Delhi and the Indian Institute of Management, Bangalore, he is a co-founder at United Villages Network Private Limited and at Rajasthan Innovation Promotion and Entrepreneurship Network. He emphasised that it is important to transform our entrepreneurial ideas into reality.

The fifth day was all about legal aspects involved in entrepreneurship. This included interactive activities like the Coffee Shop exercise and Close to Your Heart-Follow up exercise. This also included legal issues like the importance of trade secrets, copyrights, patents, trademarks and licensing agreements.

The sixth day was scheduled for business model preparation. The students were taught about various business models, revenue models and revenue sources. They were also made aware with the Critical Success Factor (CSE), break-even point and related terminologies.

The seventh day was aimed to teach competitive strategies and IP practises in technical ventures. Students learned about Porters 5 Force Model, BCG matrix and GE portfolio matrix.

The eighth day was all about basics of finance and securing resources. It taught students how to raise capital and funds. It also highlighted the concept of financial accounting.

The ninth day dealt with basics of prototype designing. It introduced



aspects of people, channel, product and prototyping. The tenth day was about Sales, Marketing and HR Management. This topic facilitated the students to clear their fundamentals regarding human resources and their management.

The eleventh day was observed as the Closing ceremony of INNOVA (EDCP 2013). Mr. Sudhir Nijhawan, CEO, Nifty Innovations was the chief guest and Mr. Vaibhav Jain, CEO & MD, Ways & Means Technology Pvt. Ltd., was the guest of honour.

THE FRESHERS' PARTY

A freshers' party was organized by the Dept. of Management Studies on 17 August 2013 to welcome the new comers. The senior students initiated the programme with a cultural extravaganza. There were mesmerizing performances by the college choir. A few senior students also shared their experiences with the newcomers. The faculty members apprised them of the norms of the college and conveyed their best wishes for the coming session.

ALUMNI INTERACTION

As a regular process of Alumni Interaction, talks were organized between the current students with three of SKIT alumni between 7 and 8 August 2013.

- * Mr. Tejveer Singh, a 2011 batch alumni shared his experiences about the avenues and scope of higher education from foreign universities. He particularly threw light on how the Master of Science degree can be pursued after writing GRE and TOFEL.
- * Mr. Ishan Suryan, a 2010 batch alumni and Design Engineer at Eicher Pvt. Ltd., Gurgaon highlighted the importance of laboratory courses in the field. He also requested Mr. Dheeraj Joshi to provide resumes of eligible students who can fill up various posts at his organization.
- * Mr. Amit Bhatt, a 2009 batch alumni and currently a CAD course trainer, talked to students about the importance of design courses.

PARTICIPATION OF DRAMATICS CLUB

The students of Dramatics club performed exceedingly well at various places of repute. The students participated at Malaviya National Institute of Technology, Jaipur on the occasion of Hindi – Pakhwara, and were awarded for their performance. The students also performed on the occasion of Engineers' Day at Institution of Engineers, Jaipur and were awarded for their excellent act.

YUVA PRERNA PRATIYOGITA

SKIT Spiritual club and Vivekananda Kendra Kanyakumari, Jaipur centre, joined hands to organise a Yuva Prerna Pratiyogita. Almost 120 students got themselves registered for the competition. The programme was well coordinated by Dr. Sharda Soni, Reader, Dept. of Chemistry.

QUIZING 2013

The Technical club of Civil Engineering department organized a quiz competition entitled QUIZING 2013. In the first phase the top five teams were selected. The second phase proved to be a close battle in which both TYCOONS & FANTASTIC FOUR were tied for the 1st position & Challenger group became the 1st runners up. The first prize was given jointly to the two groups including Hardik Sharma-EC, Himanshu Kumawat-EC, Himika Bhardwaj-EC, Mayank Soni-EC of Tycoons and Mayank Singh - CE, Devendra Kumawat-CE, Anshuman Singh Rathore - CE, Devika Saini-CE Of Fantastic four group.

AICTE GRANT

Electrical Engg. Department has received a grant of Rs. 2 Lakhs by AICTE. The EE Deptt. and IE student chapter of SKIT will utilize this grant in organizing a National Conference that will be held in 2014. Apart from paper presentations, there will be lectures by eminent speakers from IITs, NITs and PSUs.

POSTER MAKING COMPETITION BY ECO-FRIENDS' CLUB

Eco-Friends' club organised a poster making competition on the theme 'nature' on September 11, 2013. The event witnessed a noteworthy participation. Students showcased their artistic skills through various illustrations and paintings.

Swati Upadhyay (EE), Shivank Sharma (ME) and Uday Bhanu Singh (CE) together shared the first position. Certificates of appreciation were given to Heena Solanki (EC), Pooja Jain (CS), Ishwar Kumar Mahawar (IT) and Aayushi Jain (CE).

The event was co-ordinated by Dr. Swati Joshi, Senior Lecturer and Dr. Meena, Senior Lecturer, Dept. of Chemistry.

STUDENTS' ACHIEVEMENTS

1. Jai Agarwal, B. Tech. II year, Dept. of ME stood I in 'Kavya Goshti' organized at MNIT, Jaipur during the Hindi Pakhwara.
2. A group of four members including Gyanesh Kumar (II Yr. ME), Gourav Kantaliya (II Yr. EE), Mayank Verma (II Yr. ME), Puneet Purohit (III Yr. EC) from SKIT ASME Student Section won 3 prize in Student Design Competition during ASME SPDC-2013 organized by ASME Student Section, KL University, Vijayawada. The students were also honoured on the occasion of Independence Day for their remarkable achievement.

ELECTRICAL TECHNICAL QUIZ 1

Electrical Technical Club, under IE Students' Chapter (EE), organised Electrical Technical Quiz 1 on 11 September 2013. The quiz constituted 4 rounds and there were five teams contesting. A written qualifier round for the Quiz was held on Wednesday 14 August 2013, for finalising 15 candidates for 5 teams (each team comprising of 3 members – 1 student from III Yr, 1 from II Year and 1 from I Year). The winning team members are listed in the Table below:

| | | |
|----|---------------------|-------|
| 1. | Akshit | I |
| 2. | Kshitij Jangir | II/A |
| 3. | Mukesh Kumar Gurjar | III/A |

The winners will be awarded certificates at the prize distribution ceremony, to be held later in this semester.

ELECTRONICS QUIZ

IETE Student Forum organized a quiz for the students of all the semesters. It was aimed at enhancing the knowledge about the basic and advanced concepts of electronics engineering. The team comprising Vipul Khandelwal, Harshit Mittal and Varun Garg won the competition. The event was successfully coordinated by Ms. Rukhsar Zafar, Sr. Lecturer & Mr. Pallav Rawal, Lecturer, Dept. of ECE.

WELCOME ARRIVAL

The SKIT family extends a heart welcome to all the faculty members who have joined us during the current academic session. We wish them a bright career and a rewarding stay at SKIT.

DEPARTMENT OF

COMPUTER SCIENCE AND INFORMATION TECHNOLOGY

Mr. Mehul Maharishi

Sr. Lecturer

Ms. Anshika Pandey Lecturer

DEPARTMENT OF ELECTRICAL ENGINEERING

| | |
|---------------------------|--------------|
| Mrs. Suman Sharma | Reader |
| Mr. Pankaj Kumar | Lecturer |
| Mrs. Deepti Arela | Lecturer |
| Ms. Niharika Gotherwal | Lecturer |
| Ms. Himanshi Saini | Lecturer |
| Ms. Nikita | Lecturer |
| Mr. Shobhit | Lecturer |
| Mr. Jitendar Sharma | Lecturer |
| Mr. Jitendra Singh | Lecturer |
| Mr. Ashish Saini | Lecturer |
| Mr. Garvit | Sr. Lecturer |
| Mr. Jinenendra Rahul | Lecturer |
| Ms. Bhaibav Bishal | Lecturer |
| Mr. Manish Kumar Navlakha | Lecturer |
| Mrs. Rammurti Meena | Lecturer |

DEPARTMENT OF MECHANICAL ENGINEERING

| | |
|-------------------------|--------------|
| Mr. Amit K Bansal | Reader |
| Mr. Manjari Saxena | Sr. Lecturer |
| Mr. Ajay K Dhanopia | Sr. Lecturer |
| Mr. Ved Prakash | Lecturer |
| Mr. Chandan Kumar | Lecturer |
| Mr. Dhiraj K Gupta | Lecturer |
| Mr. Sudesh Garg | Lecturer |
| Mr. Sunil Kumar | Lecturer |
| Ms. Namita Soni | Lecturer |
| Mr. Chandra Mohan Kumar | Lecturer |
| Mr. Amit Alok | Lecturer |

DEPARTMENT OF

ELECTRONICS AND COMMUNICATION ENGINEERING

| | |
|--------------------|-----------------|
| Mrs. Ruchika Jain | Senior Lecturer |
| Mr. Ramesh Kumar | Senior Lecturer |
| Ms. Supriya Mahala | Senior Lecturer |
| Ms. Vinita Agrawal | Senior Lecturer |
| Mrs. Jyoti Mahawar | Senior Lecturer |
| Ms. Jyoti | Lecturer |
| Mr. Ankit Agarwal | Lecturer |
| Ms. Ritu Jain | Lecturer |
| Ms. Namrata Joshi | Lecturer |

DEPARTMENT OF ENGLISH

Ms. Deepa Sarabhai Lecturer

DEPARTMENT OF CHEMISTRY

Mr. Tanmoy Saha Lecturer

DEPARTMENT OF PHYSICS

Mr. Rajeev Jain Reader

DEPARTMENT OF MATHEMATICS

Dr. Udai K. Sharma Reader

DEPARTMENT OF CIVIL ENGINEERING

| | |
|-------------------------|-----------------|
| Ms. Pooja Jain | Senior Lecturer |
| Mr. Manmohan Sharma | Lecturer |
| Mr. Amit Kumar | Sr. Lecturer |
| Mr. Deepak Sharma | Sr. Lecturer |
| Ms. Vishakha Khandelwal | Lecturer |
| Mr. Saurabh Kumar | Lecturer |

Ph. D. AWARDED

Prof. Alok Mathur, Dept. of Mechanical Engineering was awarded doctorate on July 15, 2013 by Malaviya National Institute of Technology, Jaipur. He completed his research on "Some Issues in Performance Measurement: Select Study of Small and Medium Manufacturing Organizations (SMMOs) "under the supervision of Dr. G.S. Dangayach and Dr. M.L. Mittal, Associate Professor, MNIT, Jaipur.

THESIS SUBMITTED

Mr. Brajraj Sharma, Sr. Lecturer, Department of Physics submitted his thesis on "Design and Development of Broadband Dual Frequency Microstrip Antennas" for the Doctor of Philosophy (Science) at University of Rajasthan, Jaipur on Aug. 30, 2013.

RESEARCH PAPERS PUBLISHED

| | | |
|----------------|---|--|
| TITLE | : | Women and Life Force in Shaw's <i>Widower's House and Man and Superman</i> |
| JOURNAL | : | Lapis Lazuli-An International Literary Journal (LLIJ), ISSN 2249-4529, Vol.3/No.1/Spring 2013 |
| AUTHOR | : | Dr. Niraja Saraswat, Reader, Dept. of English |
| TITLE | : | Fractured Identity in Githa Hariharan's <i>In Times of Siege</i> |
| JOURNAL | : | New Academia : International Journal of Language and Literary Theory, ISSN 2277-3967, Vol.II, Issue II, April 13 |
| AUTHOR | : | Dr. Nidhi Sharma, Reader, Dept. of English |
| TITLE | : | Design and Performance of a Broadband Semi-elliptical Patch Antenna with C-shaped Slot for Wi-Max Applications |
| JOURNAL | : | Proceeding of IEEE Indian Antenna Week (IAW) |
| AUTHOR | : | Mr. Brajraj Sharma, Sr. Lecturer, Department of Physics |
| TITLE | : | CFD Simulation of Inline Pulse Tube |

JOURNAL : Refrigerator and Frequency Test
JOURNAL : Paripex- Indian Journal of Research, ISSN: 2250-1991, Volume 2, Issue 5, May 2013, pp. 14-16
AUTHOR : Mr. Manoj Kumar Sain, Reader, Dept. of ME

TITLE : Experimental Study of Inverted Absorber Type Solar Still with Water Depth and Total Dissolved Solid
JOURNAL : International Journal of Emerging Technology and Advanced Engineering, ISSN: 2250-2459, Volume 3, Issue 4, April 2013, pp. 627-632
AUTHOR : Mr. Manoj Kumar Sain, Reader, Dept. of ME

TITLE : Design and Development of Low Cost I. C. Engine Based Waste Heat Recovery System
JOURNAL : International Journal of Emerging Technology and Advanced Engineering, ISSN: 2250-2459, Volume 3, Issue 5, May 2013, pp. 588-594
AUTHOR : Mr. Manoj Kumar Sain, Reader, Dept. of ME

TITLE : Fabrication and Experimental Investigation of V- Through Flat Plate Collector in Hot Climate Condition of Rajasthan: A Case Study of Jaipur
JOURNAL : International Journal of Emerging Technology and Advanced Engineering, ISSN: 2250-2459, Volume 3, Issue 5, May 2013, pp. 240-247
AUTHOR : Mr. Dheeraj Joshi, Reader, Dept. of ME

TITLE : Statistical Process Control
JOURNAL : International Journal of Research in Engineering and Technology, eISSN: 2319-1163, pISSN: 2321-7308, Volume: 02 Issue: 08, Aug-2013, pp. 70-72
AUTHOR : Mr. Ved Parkash, Lecturer, Dept. of ME

RESEARCH PAPERS PRESENTED

TITLE : Solving fractional Free Electron Laser Equation by Hanotopy Analysis Method
CONFERENCE : National Conference on Modern Aspects and Challenges in Mathematics
ORGANIZED BY : M. A. J. Govt. College, Deeg (Bharatpur)
PRESENTER : Dr. Sangeeta Choudhary, Reader, Dept. of Mathematics

TITLE : Improved Efficiency and Enhanced Slow Light Performance in Photonic Crystal Waveguides Using Rectangular Unit Cells
CONFERENCE : International Conference on Communication and Electronics System Design, (ICCESD-2013)
PRESENTER : Ms. Rukhsar Zafar, Sr. Lecturer, Dept. of EC

TITLE : LRS Bianchi Type II Tilted Barotropic Fluid Cosmological Model with Heat Conduction in General Relativity

SEMINAR : National Seminar on Recent Developments in Applied Mathematics and 17 Prof. P. D. Verma Memorial Lecture -2013
DATE : 14 September 2013
ORGANIZED BY : Department of Mathematics, University of Rajasthan, Jaipur
PRESENTER : Dr. Pramila Kumawat, Reader, Dept. of Mathematics

TITLE : Air Pollution Due to Marble Dust and Its Management
CONFERENCE : National Seminar on Methodologies to Control Air Pollution
DATE : August 30-31, 2013
VENUE : MNIT, Jaipur
PRESENTER : Mr. Dinesh K Sharma, Lecturer, Mr. Ashish Nayyar, Reader, Dept. of ME

TITLE : Journey of Thermodynamics Teaching - From Heat Engines to Exergy Analysis and Beyond
CONFERENCE : National Conference on Future Directions in Thermal Engineering
PRESENTER : Dr. N. K. Banthiya, Prof. and HOD, Dept. of ME

TITLE : An Evaluation of Performance Characteristics of a Compression Ignition Engine on Higher Compression Ratios
CONFERENCE : National Conference on Future Directions in Thermal Engineering
PRESENTER : Mr. Dinesh K. Sharma, Lecturer, Mr. Ashish Nayyar, Reader, Dept. of ME

TITLE : The effect of Hydroxy (HHO) Gas on Performance and Emission Characteristics of Compression Ignition Engine : A Review
CONFERENCE : National Conference on Future Directions in Thermal Engineering
PRESENTER : Vikash Prajapat, Vineet Rastogi, Mr. Dinesh K. Sharma, Lecturer, Dept. of ME

TITLE : Effect of Exhaust gas Recirculation (EGR) on the Exhaust gas emissions in Compression Ignition Engines
CONFERENCE : National Conference on Future Directions in Thermal Engineering
PRESENTER : Dilip Kumar Garg, Trivedi Kaushik, Mr. Dinesh Kumar Sharma, Lecturer, Dept. of ME

TITLE : Performance, Emission and Heat Release Analysis of a Direct Injection Diesel Engine Running on Diesel and Soybean Ester Blends
CONFERENCE : National Conference on Future Directions in Thermal Engineering
PRESENTER : Nitin Goyal, Bhaskar Sharma, Sanjay Choudhary, Lecturer, Dept. of ME

TITLE : Energy Efficiency Opportunities in the Boilers

CONFERENCE : National Conference on Future Directions in Thermal Engineering, May 11, 2013 held at SKIT, Jaipur

PRESENTER : Mr. D. Hariyani, Mr. A. K. Mathur, Reader, Dept. of ME

TITLE : Productivity Enhancement of Solar Still: A Review

CONFERENCE : National Conference on Future Directions in Thermal Engineering

PRESENTER : Mr. Manoj Kumar Sain, Ms. Sarita Choudhary, Mr. Anandi Lal Kumawat, Dept. of ME

TITLE : Advancement in Two Stroke Engines- A Review

CONFERENCE : National Conference on Future Directions in Thermal Engineering

PRESENTER : Mr. Praveen Saraswat, Lecturer, Dept. of ME

TITLE : Infrared Thermography for Preventive Maintenance

CONFERENCE : National Conference on Future Directions in Thermal Engineering

PRESENTER : Mr. Arun Beniwal, Mr. Monu Gupta, Mr. Lokesh Godara, Lecturer, Dept. of ME

TITLE : Third Law of Thermodynamics

CONFERENCE : National Conference on Future Directions in Thermal Engineering

PRESENTER : Mr. Nitin Goyal, Mr. Devender S. Yadav, Dept. of ME

TITLE : An Investigation of Thermal Engineering Component in Curricula of Various Universities: A Comparative Study

CONFERENCE : National Conference on Future Directions in Thermal Engineering

PRESENTER : Prof. (Dr.) N.K. Banthiya, Prof. Alok Mathur, Mr. Manoj Kumar Sain, Dept. of ME

TITLE : Analysis of Program Education Objectives (PEOs) and Program Outcomes (POs) for Thermal related courses in Mechanical Engineering for RTU syllabus.

CONFERENCE : National Conference on Future Directions in Thermal Engineering

PRESENTER : Prof. (Dr.) N.K. Banthiya and Ms. Sarita Choudhary, Dept. of ME

TITLE : Survey on future Research Direction in Heat Transfer

CONFERENCE : National Conference on Future Directions in Thermal Engineering

PRESENTER : Mr. Nitin Goyal, Mr. Aman Vikram, Lecturer, Dept. of ME

TITLE : Polymer Vapourpower : A Theoretical Review

CONFERENCE : National Conference on Future Directions in Thermal Engineering

PRESENTER : Shyam Khandelwal, Sunil Manani, Gaurav Jain, Dinesh K. Sharma, Lecturer, Dept. of ME

TITLE : India's Emergence as a Leading Electric Car Manufacturer

CONFERENCE : National Conference on Future Directions in Thermal Engineering

PRESENTER : Ms. Sarita Choudhary, Mr. Ankit Agarwal, Ms. Anshul Singh, Dept. of ME

TITLE : Enhancement of Tool Material, Machining Characteristics by Cryoprocessing: A Review

CONFERENCE : National Conference on Future Directions in Thermal Engineering

PRESENTER : Ms. Monika Khurana, Mr. Ankit Agarwal, Sr. Lecturer, Dept. of ME

TITLE : Heat Transfer Enhancement with Nanofluid

CONFERENCE : National Conference on Future Directions in Thermal Engineering

PRESENTER : Mr. Jagdish Bhadu, Mr. Anil Dhariwal, Dept. of ME

TITLE : Parametric study about bucking behavior of thin stainless steel cylinder shell with a circular dent under uniform axial compression

CONFERENCE : National Conference on Future Directions in Thermal Engineering, May 11, 2013 held at SKIT, Jaipur

PRESENTER : Ms. M. Y. Nowsath Begam, Ms. Sumita, Dept. of ME

TITLE : CFD Simulation of Coaxial Pulse Tube Refrigerator

CONFERENCE : National Conference on Future Directions in Thermal Engineering, May 11, 2013 held at SKIT, Jaipur

PRESENTER : Mr. B. V. Patel, Mr. Manoj Kumar Sain, Dept. of ME

TITLE : Internal combustion engine exhaust waste heat recovery by organic ranking cycle: a Review

CONFERENCE : National Conference on Future Directions in Thermal Engineering, May 11, 2013 held at SKIT, Jaipur

PRESENTER : Mr. Trivedi Kaushik, Mr. Dilip Kumar Garg, Mr. Dinal Khakhkhar, Mr. Sandeep Bhaskar, Dept. of ME

CONFERENCE/ WORKSHOP ATTENDED

TITLE : UGC Sponsored Refresher Course in Chemistry

VENUE : Academic Staff College, Himachal Pradesh University, Shimla

DURATION : 15July-3August 2013
ATTENDED BY : Dr. Vinita Sharma, Reader, Dept. of Chemistry with 'A' grade

TITLE : Modern Approaches to English Language Teaching
VENUE : MNIT, Jaipur
DATE : 16-17 August 2013
ATTENDED BY : Dr. Nidhi Sharma, Reader, Mrs. Neha Purohit, Sr. Lecturer, Dept. of English

WORKSHOP : Prof. Parimal Merchant's Workshop on Managing for Success
VENUE : Ficci Flo Jaipur Chapter, The Fern, Jaipur
DATE : 13 July 2013
ATTENDED BY : Mrs. Abha Meel, Advisor and Ms Maneesha Kaushik, TPO

CONFERENCE : National Seminar on Methodologies to Control Air Pollution
VENUE : MNIT, Jaipur
ORGANIZED BY : IE (I), Rajasthan and MNIT, Jaipur
DATE : August 30-31, 2013
ATTENDED BY : Dinesh K Sharma, Lecturer, ME & Chandan Kumar, Lecturer, Dept. of ME

CONFERENCE : Methodologies for Air Prevention Control
VENUE : MNIT, Jaipur
DATE : 30-31 Aug 2013
ATTENDED BY : Prof. Archana Saxena, Prof. Sangeeta Vyas, Dr. Sharda Soni, Dr. Meena, Dr. Swati Joshi, Dept. of Chemistry

PAPER REVIEWED

TITLE : Synthesis, Spectral, Thermal Analysis and Molecular Modeling of Bioactive Cu(II)-Complexes with 1,3,4-Thiadiazole Schiff base Derivatives, Arabian Journal of Chemistry [Elsevier], Impact Factor 1.3
REVIEWER : Prof. Archana Saxena, Head, Dept. of Chemistry

BOOKS PUBLISHED

TITLE : Lean Manufacturing Implementation in Garment Industry, ISBN: 978-3-659-4220304
AUTHOR : Mr. Manoj Kumar Sain, Reader, Dept of ME
PUBLISHER : LAP Lambert Academic Publishing, Germany

TITLE : Reliability and Maintenance Engineering
AUTHOR : Mr. Amit K Bansal, Reader, Dept. of ME
PUBLISHER : Genius Publication

TITLE : Leadership Skills and Team Building
AUTHOR : Ms. Maneesha Kaushik, Sr. Lecturer, Dept. of MBA
PUBLISHER : Avishkar Publisher, ISBN-978-81-7910-432-3, Jaipur

An Angel Personified

*A child's mind reader, A child's first teacher
 For the trembling footsteps of a child
 She is the first supporter, A child's first mentor
 A child's first appreciator
 On the beautiful petals of a child's life
 She sprinkles dynamic colors.
 A child's first best friend
 A child's favorite parent
 For the blank pages of a child's life
 She is the creative writer.
 A child's first advisor
 A child's first philosopher
 In the dark moments of a child's life
 She is the eternal illuminator.
 A child's first idol
 A child's first inspiration
 In the journey of a child,
 from an infant to an adult
 Never have been roles
 of a being so diversified
 A mother is truly and certainly
 AN ANGEL PERSONIFIED.*

Swati Upadhyay, IB.Tech., Dept. of EE



The Perfect Educator

*A Teacher is like spring,
 Who nurtures new sprouts,
 Encourages and leads them,
 Whenever they have doubts.
 A teacher is like summer,
 Whose sunny temperament,
 Preventing discontent,
 Makes studying a pleasure.*

*A Teacher is like fall,
 Whose methods crisp and clear,
 Bring lessons of bright colours and
 A happy atmosphere. A teacher is like winter,
 When it's snowing hard outside,
 Keeps students comfortable as,
 A warm and helpful guide.*

*The Teacher, you do all these things,
 With a pleasant attitude,
 You are a teacher for all seasons
 And I pay you my gratitude.*

Ekta Rani, IV B.Tech., Dept. of IT

ANTHROPOMETRY: ESSENTIAL FOR ERGONOMICALLY DESIGN

The study and measurement of human body dimensions to create database for ergonomically design of a work station or a product is called anthropometry. The data are used to develop design guidelines for heights, clearances, grips, and reaches of workplaces and equipment for the purpose of accommodating the body dimensions of the potential work force.

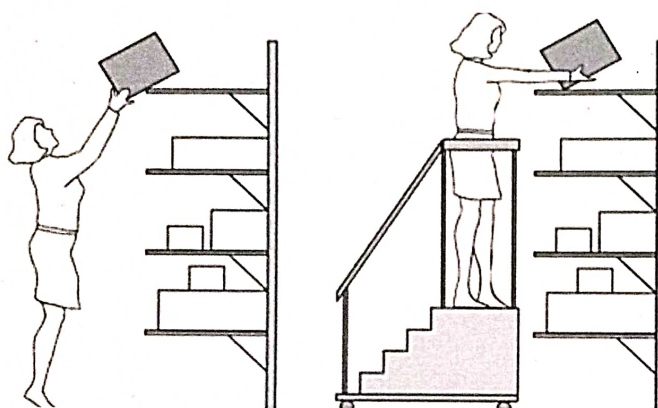


Figure 1. Design of a work station for comfort

Anthropometric data are also used in the design of consumer products such as clothes, automobiles, bicycles, furniture, hand tools, etc.

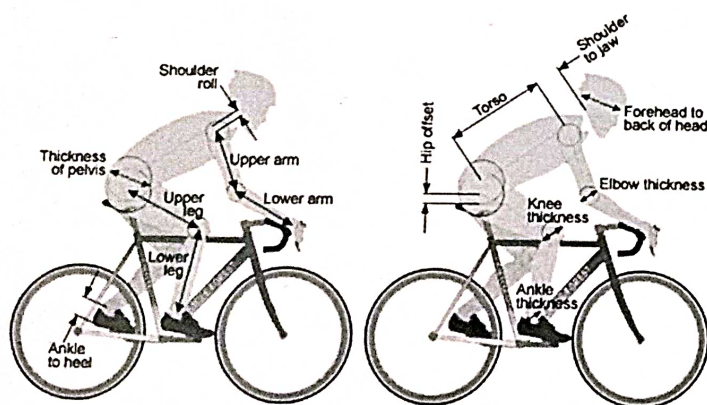


Figure 2. Ergonomically design of a bicycle using anthropometry

Human dimensions data is collected with respect to age, gender, occupation and generation. This data is used for following purposes in design.

- To determine the intended users for the design.
- To determine the relevant body dimensions for the design.
- To determine the percentage of the population to be accommodated.

- To design for the safety of users.
- To design for adjustable range like seats and steering wheels of cars, office chairs etc.
- To determine the percentile value of the selected anthropometric dimension. For Example to design a stool to accommodate the 95th percentile of male body weight. That should include most people. Or design a tray to be carried by workers to be light enough for the 5th percentile of women.
- Make necessary modifications to the data to take in to consideration clothing, gloves, and headwear.
- Use mock-ups or simulators to test the design.

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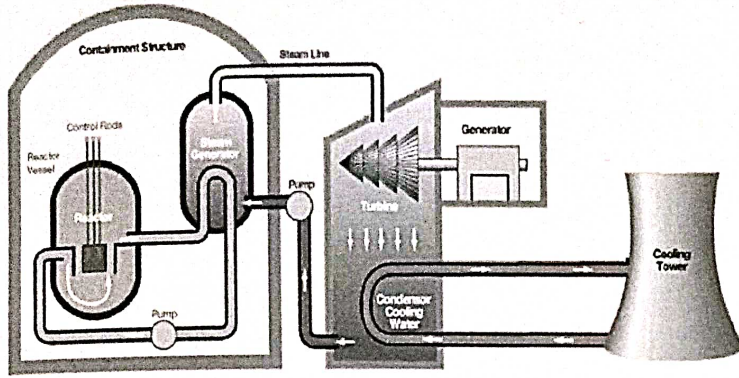
Mr. Manoj Kumar Sain

Reader, Dept. of ME

LINEAR AND NON-LINEAR ANALYSIS OF ADVANCED HEAVY WATER REACTOR

Nuclear reactor response properties such as Temperature coefficient of reactivity and Void coefficient of reactivity usually refer to the thermodynamic and phase-change response of the neutron moderator heat transfer process respectively. Reactors whose heat transfer process has the operational property of a negative void coefficient of reactivity are said to possess an inherent safety process feature. An operational failure mode could potentially alter the process to render such a reactor unsafe.

It has been observed that the mathematical model for the AHWRs undergoes supercritical Hopf bifurcations as a typical bifurcation parameter is varied. The work we have reported, results with the void coefficient of reactivity as the bifurcation parameter. However, we have verified that the same holds even when the fuel coefficient of reactivity is varied. This result has practical implication related to the stability of the AHWRs as compared to the stability of PWRs and BWRs. The supercritical nature of the bifurcation of AHWRs implies that they are inherently safer globally stable to any perturbation resulting due to external and /or internal variation result in small amplitude limit cycles preventing any catastrophic damage and providing an opportunity to retract back to stable steady-state operation. Both these features are absent in the PWRs and BWRs. In



their case, there are no small amplitude solution in regime can lead to a catastrophe. In addition, even in the linearly stable regime close to the stability boundary, slightly larger perturbations can cause the system to switch from steady operation to large amplitude power oscillations.

There is another practical implication of the present study. In this study, we have systematically obtained the stability diagram of the steady-state operation of the AHWRs in the parameter plane comprising of the void and the fuel temperature coefficient of reactivity considering $n=3$ and $n=4$ representation mathematical model. For a fixed value of the fuel coefficient of reactivity (i.e. for a chosen nuclear fuel and the designed reactor temperature), we can obtain the range of values for the void coefficient of reactivity to ensure stable operation. In particular we can choose the value for the void coefficient of reactivity such that it is sufficiently far from the stability boundary ensuring that the operation would be stable for the largest possible variation in the void coefficient of reactivity. Thus it can facilitate the decision regarding the lattice pitch of dysprosium within the fuel cluster which affects the void coefficient of reactivity.

For non linear analysis we have used method of multiple scales (MMS) could serve as a good mathematical tool for the analysis of dynamical system modeling reactor dynamics easily be applied to other similar dynamical systems. The suitability of MMS has been judged based on verifying the prediction of the MMS against numerical simulation of the dynamics system. The qualitative nature obtained by numerical simulation. Also there is a good agreement between the amplitudes of the limit cycles obtained by MMS and numerical simulation.

In previous work various mathematical models of AHWR has analysis by the same technique but assuming certain approximation but in present work we have done the analysis of AHWR more efficiently because several assumption we removed however it can create large nonlinearity in systems but MMS is very effective tool for analysis of those kind of models. And it can be done successfully.

Mr. Bharat Modi
Reader, Dept. of EE

A CARBON FOOTPRINT: CLIMATE CHANGE

Today's changing life style has a considerable impact on the environment and also has an effect in climate change. The main responsible component is emission of huge quantity of greenhouse gases that get produced during the usage of electricity, transportation, cooking, burning and consumption of various grades of products and various industrial applications. The total amount of greenhouse gases produced directly and indirectly support human activities, usually expressed in equivalent tons of carbon dioxide (CO_2). Apart from Carbon dioxide (CO_2) other greenhouse gases consist of Methane (CH_4), Nitrous Oxide (N_2O), Ozone (O_3), and other halocarbons.

The carbon footprint is a measurement of all greenhouse gases, we individually produce and has units of tones (or kg) of carbon. A carbon footprint is a measure of the impact our activities have on the environment, and in particular climate change.

Carbon footprint is the sum of all emissions of CO_2 (carbon dioxide), which is generated by our activities in a given time frame.

Many of our actions generate carbon emissions, which contribute to accelerating global warming and climate change. When you drive a car, the engine burns fuel which creates a certain amount of CO_2 , depending on its fuel consumption and the driving distance. (CO_2 is the chemical symbol for carbon dioxide). When you heat your house with oil, gas or coal, then you also generate CO_2 . Even if you heat your house with electricity, the generation of the electrical power may also have emitted a certain amount of CO_2 .

A carbon footprint is made up of the sum of two parts, the primary footprint and the secondary footprint

1. The **primary footprint** is a measure of our direct emissions of CO_2 from the burning of fossil fuels including domestic energy consumption and transportation (e.g. car and plane). We have direct control of these.
2. The **secondary footprint** is a measure of the indirect CO_2 emissions from the whole lifecycle of products we use especially those associated with their manufacture and eventual breakdown. To put it very simply the more we buy the more emissions will be caused on our behalf.

FACTS OF CARBON FOOTPRINT

- For each (UK-) gallon of petrol fuel consumed, 10.4 kg carbon dioxide (CO_2) is emitted.
- For each (US-) gallon of gasoline fuel consumed, 8.7 kg carbon dioxide (CO_2) is emitted.
- If your car consumes 7.5 liter diesel per 100 km, then a drive of 300 km distance consumes $3 \times 7.5 = 22.5$ liter diesel, which adds

$22.5 \times 2.7 \text{ kg} = 60.75 \text{ kg CO}_2$ to your personal carbon footprint.

- The global average carbon footprint is ~6 tons CO_2e / year / person
- Cell phone calls account for about 125 million tons CO_2e - 1/4th of a percent of global emissions
- Forest fire – 100 million tons CO_2e
- 2.5 Acres deforestation – 500 tons CO_2e
- A new car – 17 tons CO_2e
- Flight (LA to Spain) – 4.6 tons CO_2e
- A new computer – 720 kg CO_2e
- Road trip: SF to LA – 500 kg CO_2e
- Light on for a year – 400 kg CO_2e
- 10 lbs of trash – 3.1 kg CO_2e
- Bottle of water – 200g CO_2e
- Cycling a mile – 100g CO_2e
- Banana – 80g CO_2e
- Walking through a door – 10g CO_2e
- A web search – 2g CO_2e

CONTROL OF CARBON FOOTPRINT

By taking action and embracing renewable energy sources, we are able to decrease the size of our carbon footprints and help save our planet and save the money.

Travel light.

Cars and trucks run on fossil fuels, which release carbon dioxide into the atmosphere. Walk and you save one pound of carbon for every mile you travel.

Teleconference instead of flying.

For office meetings, if you can telephone or video conference, you will save time, money, and carbon emissions. Airplanes pump carbon emissions high into the atmosphere, producing 12 percent of transportation sector emissions.

See the light. Use compact fluorescent light bulbs. These energy-efficient bulbs help fight climate change because they reduce the amount of fossil fuels that utilities burn. You will save 100 pounds of carbon for each incandescent bulb that you replace with a compact fluorescent, over the life of the bulb.

Recycle and use recycled products.

Products made from recycled paper, glass, metal and plastic reduce carbon emissions because they use less energy to manufacture than products made from completely new materials. For instance, you'll save two pounds of carbon for every 20 glass bottles that you recycle. Recycling paper also saves trees and lets them continue to reduce climate change naturally as they remain in the forest, where they remove carbon from the atmosphere.

Inflate your tire.

If you own a car, it will get better gas mileage when the tire are fully



inflated, so it will burn less gas and emit less carbon. Check your automobile monthly to ensure that the tires are fully inflated. Follow this tip and save 300 pounds of carbon dioxide for every 10,000 miles you drive.

Plant native trees.

Trees absorb carbon dioxide from the air and use it as their energy source, producing oxygen for us to breathe. A tree in the temperate zones found between the tropics and the polar circles can remove and store 700 to 7,000 pounds of carbon over its lifetime. A tree that shades a house can reduce the energy required to run the air conditioner and save an additional 200 to 2,000 pounds of carbon over its lifetime.

Turn down the heat.

Heating and air conditioning draw more than half of the energy that a home uses. Turn down the heat or air conditioning when you leave the house or go to bed. You can easily install a programmable thermostat that can save up money and carbon.

Buy renewable energy.

Electricity generation produces 40 percent of carbon emissions from the United States. A growing number of utilities generate electricity from renewable energy sources with solar panels, windmills and other technologies. If your utility offers renewable energy, buy it. If not, send them a message asking for clean energy.

Act globally, eat locally.

If you shop at a supermarket, the food you buy may travel in a plane from the other side of the world, burning fossil fuels the entire trip. Shop at local farmers, markets and you will find fresh and healthy food, and help save our climate.

Dr. Vinita Sharma

Reader, Dept. of Chemistry

RESEARCH IN INDIA

Nation-building requires human-building. Of late there is an unusual enthusiasm in creating a research culture in many institutions of higher learning in India. This is mainly due to the growing awareness that educational institutions must focus on research if they want to be on top. Added to this awareness are the strict directions from MHRD and UGC to strengthen the research outputs in the deemed to be universities. Research should be at the core and must be instrumental in generating a major interface with the academic and business world. It must provide a new theoretical frame work that enable reassessment and refinement of current practices and thinking. Research is used to establish or confirm facts, reaffirm the results of previous work, solve new or existing problems, support theorems, or develop new theorems. It empowers the faculty for an in depth approach in teaching. It has the potential to enhance the consultancy capabilities of the researcher. Research can be internally driven or projects can be commissioned by national and international organizations such as the UNO, World Bank, OECD, Asian Development Bank, NCERT, Planning Commission, ISRO, DRDO, Central & State ministries and industrial agencies.

India's share of world research output in clinical medicine was a paltry 1.9% in 2010, psychiatry (0.5%), neurosciences (1.4%), immunology (1.8%), molecular biology (2.1%) and environmental research (3.5%).

In mathematics, India's share of world output stood at around 2% in 2010, while it was 17% for China. In case of materials sciences, India's share of world research was at 6.4% in 2010, while China's stood at 26% — a rise from 5% in 1996.

While India's research on physics was 4.6% in 2010, China's stood at 19%.

In 2010, India's largest shares of world research output were in chemistry (6.5%), materials science (6.4%), agricultural sciences (6.2%), pharmacology and toxicology (6.1%), microbiology (4.9%), physics (4.6%) and engineering (4.2%).

India is often referred to as the next big place for computer sciences. But the figures on its research are abysmally low. Only 2.4% of global research on computer sciences was from India in 2010 while the world share moved to three emerging research economies - China (15%), Korea (6.3%) and Taiwan (5.7%).

India's global share of research in economics stood at 0.7% in 2010 while in social sciences it was worse at 0.6%.

The biggest declines in volume of research between 1981 and 2010 were in plant and animal sciences (-2.2%) and agricultural sciences (-1.6%). The most significant expansions were in pharmacology and toxicology (+4.2%), microbiology (+3.2%) and materials sciences (+3.1%).

It pointed out that India's share of world output in engineering fell from 4.3% in 1981 to 2.2% by 1995. Later, India regained its lost

share, increasing to 4.25 by 2010. However, even then, India was overtaken by China (16.4%), Korea (5.4%) and Taiwan (4.4%).

From the above mentioned data, it is evident that more emphasis is required to promote research in India. At the undergraduate level itself research should be incorporated in the curriculum. Some Universities in India like the Christ University, Bangalore, have already taken the lead in introducing research as an integral part in the course curriculum and Continuous Internal Assessment (CIA). UG students take up their research topic after much thought and discussions and some among them develop on the same topic for their Post Graduate (PG) and M.Phil. dissertations and later for PhD. Such an approach will greatly contribute to making one an authority in one's research area. This will ensure an urge for innovation and intellectual curiosity.

The current level of our spending on research and development is only 0.9 % of our GDP. Currently, the practical relevance of research to the economic and societal progress is not sufficiently recognized in India. Indian talent is more recognized overseas and where there is a chance to prove and succeed, talent moves. Celebrated Nobel laureate economist Amartya Sen is a case in point. The proposed plan of the central government to enhance the spending on research and development to 2% of GDP from the current 0.9% can act as a major boost to the research and development activities in India. The focus should be on applied research and in niche areas.

One of the main impediments to good research in India is the lack of scientific training in the methodology of research. Many of our researchers and even their guides (supervisors) are incompetent to carry out methodologically sound empirical research. The much needed industry academia interface in research is conspicuous by its absence on many occasions. The interaction that the research departments of universities have with government departments and agencies remains inadequate. Large extent of unpublished primary data at the disposal of government departments remains untouched by researchers. The unprofessional management and functioning of libraries is another problem the researchers in India are faced with.

Speaking to students at Pune's Fergusson College on Sunday morning, Mr. Narendra Modi (Chief Minister, Gujarat) underlined the difference between becoming self-sufficient and confident, and remaining a perennially beggarly nation dependent on handouts from the Government. He said about the research in India "If a country does not give emphasis on research, there is stagnancy. Continuous innovation is a sign of life. Qualitative research is the need of the hour. We have to emphasize on research which should not be only for displaying a certificate in the drawing room of homes but for nation building. Research, when it serves useful social purposes, can be a great tool for nation-building. When research is not paid attention, nations stagnate. We must create an atmosphere where quality, practical research can flourish." As he also made it clear that research must be qualitative and centralized to social and economical welfare. American universities do research but not just

for the doctorate label. All research documents become tools into national policy-making. Unfortunately, in India, research work goes waste and no unified database is made of it.

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Mr. Dinesh Kumar Sharma

Lecturer, Dept. of ME

FIBER BRAGG GRATING

The first in-fiber Bragg grating was demonstrated by Ken. O. Hill in 1978. Fiber Bragg Gratings are constructed by exposing the core of a single-mode fiber to a periodic variation of intense ultraviolet light. The exposure produces a permanent increase in the refractive index of the core of the fiber, creating a fixed index modulation according to the exposure pattern and this fixed index modulation is called a grating. At each point of periodic variation a small amount of light is reflected. These all the reflected light signals combine coherently to one large reflection at a particular wavelength, when the grating period is approximately half the input light's wavelength. This is referred to as the Bragg condition, and the wavelength at which this reflection occurs is called the Bragg wavelength.

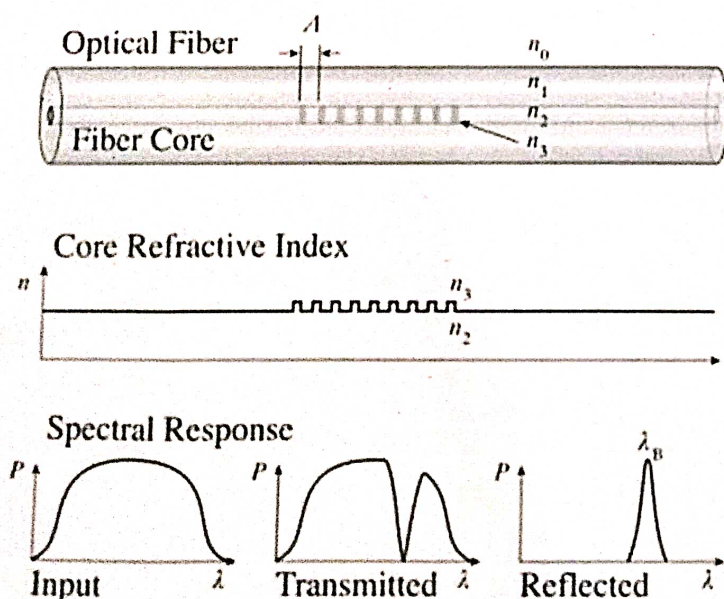


Figure: Variation of refractive index and spectral response

Light signals at wavelengths other than the Bragg wavelength, which are not phase matched, are essentially transparent. Therefore, light propagates through the grating with negligible attenuation or signal variation. Only those wavelengths that satisfy the Bragg condition are affected and strongly back-reflected. The ability to accurately preset and maintain the grating wavelength is a fundamental feature and advantage of fiber Bragg gratings.

The central wavelength of the reflected component satisfies the Bragg relation:

$$\lambda_B = 2n\Lambda$$

Where n is the index of refraction, Λ the period of the index of refraction variation of the FBG. Due to the temperature and strain dependence of the parameters n and Λ , the wavelength of the reflected component will also change as function of temperature and or strain.

Jyoti Mahawar and Shubhi Jain

Sr. Lecturer, Dept. of EC

GLOBAL WARMING: INDIAN SCENARIO ON CARBON CREDITS

One of the environmental threats our planet faces today is the potential for long-term changes in the Earth's climate and temperature patterns known as global climate change. Scientists estimate that as a result of global climate change, the Earth's average temperature could increase as much as six and one-half degrees Fahrenheit by the year 2100. While this may not sound like much of an increase, if the temperature increase approaches the six and one-half degree mark, the Earth will be a much different place than we know it today. To prevent this sort of disruption to the many natural and human systems that everyone on our planet depends on, we must all work to control global climate change. Determining the potential causes of global climate change has been a long-term process that has involved the work of thousands of scientists around the world. An important step in this process was made in 1995 when over 2,500 scientists from around the world agreed for the first time that emissions of greenhouse gases from human activities have influenced the global climate.

(I) CONSEQUENCES OF GLOBAL CLIMATE CHANGE

Although climate change may result in some benefits such as extended growing seasons or more moderate temperatures in some areas, the overall effects are likely to be harmful. Sea level rise, as a result of climate change, could lead to the loss of many coastal wetlands, and Entire Island Nations could disappear. Changes in the quality and availability of water resources could occur and worsen conflicts over water use. Healthy forests could be greatly reduced as the range of tree species shifts. Additionally, humans could suffer from increase in the spread of infectious diseases, heat-related deaths, and air pollution. Global climate change could potentially

cause sea levels to rise as oceans warm and expand, and as a result of ice cap and snow cover melting. The Inter-governmental Panel on Climate Change (IPCC) projects a sea level increase of six inches to more than three feet by the year 2100. Because half the U.S. population lives within 50 miles of the coastline, this would be disastrous.

There are also likely to be significant economic and social costs as agriculture is forced to make painful adjustments in response to climate changes. Droughts, floods and storms could become more severe, and entire agricultural regions could become disrupted as rainfall and temperature patterns shift. It is unknown whether farmers and governments will be able to adopt new techniques and management approaches that can deal with the negative impacts of climate change. It is also hard to predict how relationships between crops, pests, weeds, and livestock will evolve. The result could be an inability to provide adequate food resources to a growing world population. This could lead not only to higher food prices, but also to increased conflict throughout the world as people compete for resources in a very different global environment.

(ii) KYOTO PROTOCOL

The Kyoto Protocol is a protocol to the international Framework Convention on Climate Change with the objective of reducing Greenhouse gases that cause climate change. It was agreed on 11 December 1997. The Kyoto Protocol is an agreement under which industrialized countries will reduce their collective emissions of greenhouse gases by 5.2% compared to the year 1990 (but note that, compared to the emissions levels that would be expected by 2010 without the Protocol, this limitation represents a 29% cut). The goal is to lower overall emissions of six greenhouse gases - carbon dioxide, methane, nitrous oxide, sulfur hexafluoride, hydrofluorocarbons, and perfluorocarbons - averaged over the period of 2008-2012. National limitations range from 8% reductions for the European Union and some others to 7% for the US, 6% for Japan, 0% for Russia, and permitted increases of 8% for Australia and 10% for Iceland.

However, to encourage the participation in emission reduction process a mechanism known as Clean Development Mechanism (CDM) has been provided.

The CDM allows industrialized countries to invest in emission reduction projects in developing nations and earn carbon credits corresponding to the level of emissions prevented. These credits can be used by countries or companies to meet their reduction targets. They can also be banked, or sold. CDM enables industrialized countries to achieve emission reduction at a lower cost while developing nations benefit from foreign investment, clean technology transfer and less pollution.

(iii) CARBON CREDITS:

The primary purpose of the Protocol was to make developed countries pay for their ways with emissions while at the same time monetarily rewarding countries with good behaviour in this regard.

Since developing countries can start with clean technologies, they will be rewarded by those stuck with „dirty “ ones. This system poises to become a big machine for partially transferring wealth from wealthy, industrialised countries to poor, undeveloped countries. A CER or carbon Credit is defined as the unit related to reduction of 1 tonne of CO₂ emission from the baseline of the project activity.

(IV) CDM PROJECT TYPES

Carbon Credits are sold to entities in Annex-I countries, like power utilities, who have emission reduction targets to achieve & find it cheaper to buy „offsetting “ certificate rather than do a clean-up in their backyard. Type of projects, which are being applied for CDM and which can be of valuable potential, are:

- **Energy Efficiency Projects**
 - Increasing building efficiency (Concept of Green Building/LEED Rating)
 - Increasing commercial/industrial energy efficiency (Renovation & Modernization of old power plants)
 - Fuel switching from more carbon intensive fuels to less carbon intensive fuels; and
 - Also includes re-powering, upgrading instrumentation, controls, and/or equipment
- **Transport**
 - Improvements in vehicle fuel efficiency by the introduction of new technologies
 - Changes in vehicles and/or fuel type, for example, switch to electric cars or fuel cell vehicles (CNG/Bio fuels)
 - Switch of transport mode, e.g. changing to less carbon intensive means of transport like trains (Metro in Delhi); and
 - Reducing the frequency of the transport activity
- **Methane recovery**
 - Animal waste methane recovery & utilization
- **Installing an anaerobic digester & utilizing methane to produce energy**
 - Coal mine methane recovery
- **Collection & utilization of fugitive methane from coal mining;**
 - Capture of biogas
- **Landfill methane recovery and utilization**
 - Capture & utilization of fugitive gas from gas pipelines;
 - Methane collection and utilization from sewage/industrial waste treatment facilities
- **Industrial process changes**
 - Any industrial process change resulting in the reduction of any category greenhouse gas emissions
- **Cogeneration**
 - Use of waste heat from electric generation, such as exhaust from gas turbines, for industrial purposes or heating (e.g. Distillery-Molasses/bagasse)

- **Agricultural sector**

- Energy efficiency improvements or switching to less carbon intensive energy sources for water pumps (irrigation)
- Methane reductions in rice cultivation
- Reducing animal waste or using produced animal waste for energy generation (see also under methane recovery) and
- Any other changes in an agricultural practices resulting in reduction of any category of greenhouse gas emissions

Mr. Sarfaraz Nawaz

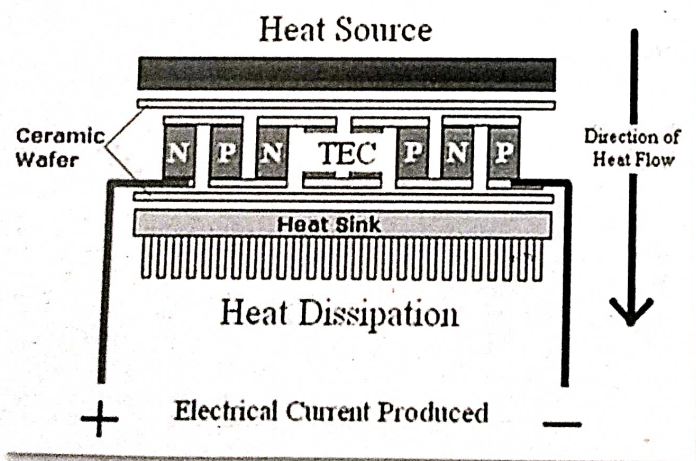
Reader, Dept. of EE

THERMOELECTRIC GENERATION, TURNING WASTE HEAT INTO ENERGY

The world wastes a lot of heat. Between half and two-thirds of the fuel we burn to create, energy is dissipated as heat into the atmosphere. While it has been long known that waste heat can be converted into energy, the low efficiency of early thermoelectric generation systems was such that it limited the process's usefulness.

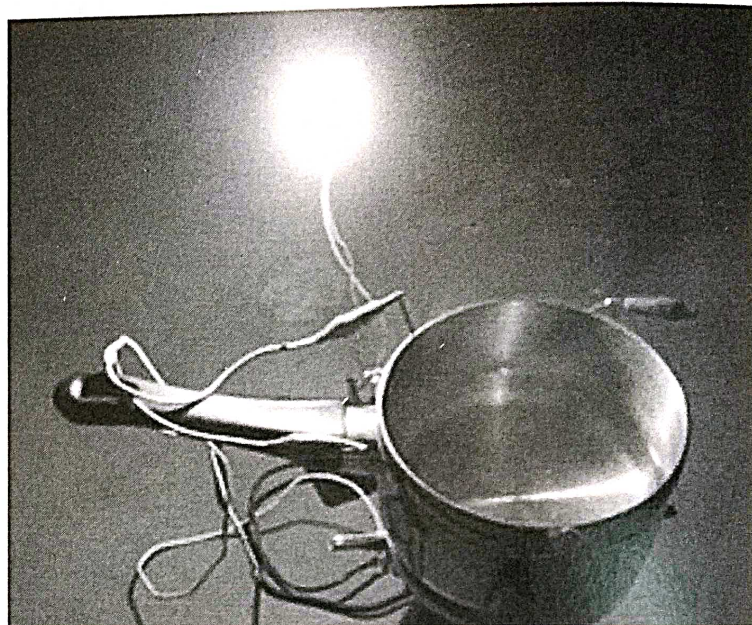
Thermoelectric generators (TEGs, and also called thermo generators) are essentially devices designed to convert heat into electricity, using two materials at different temperatures, directly into electrical energy. The greater the differential between the "hot" side and the "cold" side, the more power can be produced.

TEGs can take waste heat from energy generation or industrial processes and convert it into electricity. TEGs can provide electricity to a load directly when a constant heat source is available, or they can be used in combination with batteries if the heat source is not constant. A typical TEG is made of bismuth-telluride semiconductors sandwiched between two metalized ceramic plates.



While TEGs will never be major energy sources – they would require insane amounts of heat to make that type of power via the Seeback effect – they have a number of small but increasingly important applications in manufacturing, data centers, the automotive industry and in military applications.

Here is a small example of how much power we can generate. Below is a pot of hot water with 4-thermoelectric modules attached around the sides. The output from this simple thermoelectric generator (TEG) is about 8 watt and the light is a 12 volt auto lamp.



TEG: THE NEXT GENERATION

The efficiency of thermoelectric power generation has been traditionally low: between about 5 and 10 percent. But in recent years, advances in technology (particularly nanotechnology) have raised efficiency to 15 to 20 percent. This, along with the emergence of small and targeted applications, has raised interest in TEGs. Self-powering machine sensors: Manufacturing facilities and data centers run large amounts of equipment that must be kept cool to operate at maximum efficiency. Sensors can help make sure equipment doesn't overheat, but sensors, themselves must be plugged in add to the heat loads. TEG-powered sensors located at machine hot spots can power themselves using ambient heat while monitoring and communicating problems to operations personnel. The sensors can provide information such as temperature, humidity, wear and tear, and whether parts need maintenance or replacement. If these intelligent network sensors are activated only when sending or receiving data, the amount of energy they require is tiny (on the milliwatt scale), and only the smallest thermoelectric generators/sensors are required.

Automotive: Heat from the exhaust of internal combustion engines can be harvested into energy with the addition of a thermoelectric generator in the vehicle. With car exhaust reaching temperatures of about 1,300 deg F, the enormous delta temperature could be capable of generating between 500 and 750 watts of electricity, which could, for example, charge a battery in a hybrid vehicle or reduce the load on a car's alternator, improving fuel economy.

Due to the fact that TEGs eliminate the need for wires and batteries, their primary applications have been in remote places where the use (and replacement) of batteries is impractical or impossible, such as in offshore engineering operations, lighthouses, oil pipelines and remote telemetry and data collection in satellites and spacecraft.

Military: As the military gear becomes more and more high-tech and require larger amounts of electrical power, TEG systems, scavenging waste heat, have the potential to contribute to electrical power generation and improve fuel efficiency. There is also a tactical advantage: by harvesting the exhaust heat from vehicles, thermogeneration systems reduce their infrared signals and help them stay hidden from enemy surveillance.

Many scientists have declared that large-scale alternative energy will be only part of a wide overall energy mix. What will ultimately fill the gaps where solar farms, wind farms and fuel cells simply cannot go is distributed micro generation. Thanks to advancements in nanotechnology, not to mention the escalating need for microgeneration, thermoelectric power generation may be part of that mix.

Mr. Ankit Agarwal

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GOOGLE GLASS

Google Glass is a wearable computer with an optical head-mounted display (OHMD) that is being developed by Google in the Project Glass research and development project. Google Glass displays information in a smart phone-like hands-free format, that can communicate with the Internet via natural language voice commands. The widely anticipated evolution hatched Google Glass, a spectacle-like device that contains a hidden computer, a thumbnail-size transparent display screen above the right eye and other digital wizardry.

This Internet-connected headgear is set up to let users receive search results, read email, scan maps for directions and engage in video chats without reaching for a smart phone. Google Glass' grasp of voice commands even makes it possible to shoot hands-free photos and videos.



Navigating the Glass software requires swiping a finger in a forward or backward direction or an upward or downward direction on the right side of the frame. Remembering the correct direction to swipe to get to a certain set of controls or information was confusing at first, but it didn't take long to get the hang of it. Glass can connect to

the Internet through a Wi-Fi network or by pairing with your smart phone through a Bluetooth connection. Once online, it's easy to ask Google's search engine for a piece of information. Critics deride Glass as another disturbing example of how enslaved people are to their devices and a sign that technology is obliterating personal privacy.

Google has strived to imbue Glass with a sense of style by decorating the titanium frames in five different colors: charcoal, tangerine, shale, cotton and sky blue. Glass also weighs about the same as a pair of regular sunglasses, a vast improvement over Google's early prototype of the device, which consisted of a phone attached to a scuba mask. Glass doesn't actually have any spectacles in the frame, though Google eventually hopes to offer that option for those who wear prescription lenses. Glass looked best with a sunglass clip-on designed for wearing the device outdoors. Turning on Glass is done by tapping a finger on the right side of the frame. The device can also be activated by tilting your head upward. Glass users have to turn on the device frequently because it automatically turns off every 30 seconds.

The screen is deliberately aligned slightly above the right eye so it won't prevent users from maintaining eye contact during face-to-face conversations. That means you need to glance upward when you want to look at something on the screen. Glass' coolest feature is its ability to almost instantly take photos with the device's 5-megapixel camera or record high-definition (720p) videos that provide a startling perspective on how your own eyes see things. This is done simply by saying "OK Glass, take a picture" or "OK Glass, record a video" and the device does it. The images can then be seen on the display screen and, then, with the right app, shared on Twitter or Facebook and stored on your Google Plus profile.

All in all, Glass looks like it's going to emerge as device that advances technology in ways bound to excite gadget lovers and information junkies while annoying plenty of others who may wish there was an app to transport them to a simpler time.

Mrs. Priyanka Sharma

Lecturer, Dept. of EC

"A human being is a part of the whole called by us universe, a part limited in time and space. He experiences himself, his thoughts and feeling as something separated from the rest, a kind of optical delusion of his consciousness. This delusion is a kind of prison for us, restricting us to our personal desires and to affection for a few persons nearest to us. Our task must be to free ourselves from this prison by widening our circle of compassion to embrace all living creatures and the whole of nature in its beauty."

Albert Einstein

HAVE YOU SOLD YOUR COMPUTER??

A few days back I witnessed something unusual in my room. Six months ago I had collected a few obsolete batteries, electric fuses, printed circuit boards, miniature circuit breakers and several other electrical and electronic items on a plastic sheet. I noticed that a part of that sheet was tarnished. I was stupefied and decided to find out the cause of that phenomenon.

I was shell shocked to know the answer because that was a global problem, called 'electronic waste' (often termed as E-waste). It has got deep roots in the world of technology and is insidiously growing as a serious concern for the human race.

E-waste encompasses a wide range of discarded electrical and electronic items such as computers, MP3 players, batteries which we use in our cell-phones, televisions, air conditioners and even the tiny machines running our clocks. The composition of E-waste is quite diverse. It consists of several things of our daily usage including plastics, glasses, wood and plywood, concrete, and the list is almost endless. The presence of elements like mercury, lead, arsenic, cadmium, selenium, and hexavalent chromium make it severely hazardous in nature. They contain over 1000 different substances and out of which a large number of them are toxic and can cause substantial pollution when disposed off.

Humans are moving fast in the world of technology and that is why we find an exemplary change in our lives, but that is posing the pronounced danger of fatal pollution. Our own nation imports advanced technological products but the authorities seem nonchalant to check the waste that is invariably dumped out in our surroundings. Obsolete computers aggravate this problem by generating large amount of net E-waste. Every day, E-waste is sent to U.S prisons where the prisoners recycle it. They smash apart the computer monitors without any protection against glass and harmful gases that are ejected in the process. We too sell our computers and never care about ensuring that we are selling it to a registered recycler or not.

E-waste also poses a potential security threat to everyone who is involved in the trade. Hard disk, if not properly erased can be used to retrieve the confidential information. We generally throw our sim cards, credit cards which can be used to fetch information about our financial transactions, personal and official data and hence we can imagine how obliterating the E-waste can do to us. Changing the stance to our environment and human life, E-waste is a mass destructor. The lead and chromium content can percolate through soil, enter the human cells and can cause genetic problems. In that case, to see humans wandering with their legs growing out of shoulders, eyes placed on chest or with multiple heads will not be rare anymore.

If we are not interested in using the obsolete products, we can always give them to schools and other educational institutions so that every child who can't afford the latest and expensive

technology, could learn to use them.

It is higher than high time for us to wake up and try to incorporate the practice that never contributes to generate E-waste. Technology is present around us but I think the way we use it, is the only thing that matters the most. Just like 'pronunciation' is the soul of any language, similarly 'way to use' is the soul of technology. So, let's unite our attempts towards saving our unique planet from the devilish E-waste and yes, be careful to sell your computer next time.

Narendra Singh

III B.Tech., Dept. of EE

A DREAM

MY last dream was unusual.

*In no time, an unfamiliar place became familiar;
Some faces known for just a few days
Became the very essence of the night's experience.*

*In the dream everyone
performed the role assigned to them
Similar to that of the real world;
The faces were actually difficult to touch;
But they were not so far away as to be forgotten.
Usually dreams are forgotten
But those faces can never be,
Nor that place can be,
As those faces and place become
part of everlasting memories.*

*When I regained consciousness, I asked myself
Is that place important to me or those faces???*

And I found myself wondering.

I asked myself,

*Would that place be so
interesting without those faces,
Or would the faces have ever been known
if I had not been to that place?*

*Such unknown faces and
unknown places remain a mystery*

Are they part of destiny,

Or mere coincidence?

*Such mysteries remain unsolved
and unanswered...*

Nikhil Jain, II B. Tech., Dept. of ECE

RANDOM THOUGHTS FOR INDIVIDUAL GROWTH

Individual growth is a concern for everybody including students. If students have to grow in future, they need to work for it. The institute, its management and faculty are working towards helping you in achieving your goals. Attending classes, making efforts to learn what is taught you, applying to work in laboratories and project work, participating in extra-curricular activities and learning during extra inputs provided by the institute in terms of soft skills programme and Campus Recruitment Training (CRT) are some of the initiatives which will be of great help to you in future. Here are some thoughts of mine which can bring further shine to your growth.

1. Get Rid of Your Child Syndrome

As far as I understand, there are no 'children' in the Institute. First year students have come from schools where they were being treated as 'children'. They should not think that they are still children. In the psychological literature the usual stages of development are: childhood from 6 to 12 years, adolescence from 12 to 19 years and adulthood from 19 years onwards. Thus most of you are either adolescents or adults. An Indian citizen obtains voting rights after he/she attains the age of 18, and is also considered legally as an adult.

All of you have to get out of the 'child syndrome', and start thinking that either you are an adult or going to be an adult within a year or two. You must treat your friends and juniors as adults, not children. An adult is responsible for his/her actions. An adult does not need to be told what he/she should do or not do all the time. He/she knows what is right or wrong for him/her. Thus all of you know what is right for you, and you must work as a responsible adult.

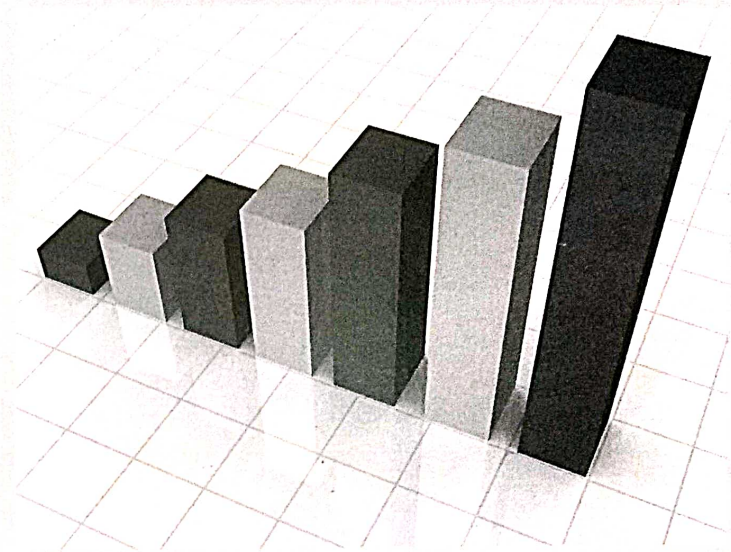
2. Language Learning and Language Proficiency

We communicate with each other with the help of a common language between us. Living in northern India, our mother tongue is usually Hindi. We generally learn English in schools. Though English is not our mother tongue, proficiency in speaking and writing English is extremely important for all of us to grow in our careers.

My hypothesis is that if one is good at one language, he/she can also become good in other languages by making a little effort. This means that if you are good at Hindi or your mother tongue, you could be good at English too. However, efforts will be required to become proficient in both the languages.

I am not an English teacher, but I do see every day applications or other written material from students. A few ground rules for writing correct and effective English for those who are not very confident are:

(a) Write simple sentences. Avoid complex sentences. This will



result in fewer grammatical mistakes on your part.

- (b) Whenever you write an English sentence, you must ensure that it has a verb.
- (c) When you write an English sentence, 'check that the verb you use matches with the subject. You must have a singular verb with a singular subject and plural verb with a plural subject.'
- (d) Once you have got into a habit of checking (b) and (c), you could attempt to write complex sentences.

3. Dictionary and Thesaurus

Always keep a good dictionary with you and refer to it whenever there is a doubt about a spelling or the meaning of a word.

Thesaurus is the reverse of a dictionary. If you are not able to recall a word, but you remember another word closer in meaning to it, you can refer to a thesaurus. This will give a large number of words closer in meaning to the word you had in mind. Also you may be able to find the word you were not able to recall. There are a number of thesauruses in the market, but 'Roget's Thesaurus' is the one which in my opinion is still the best and useful.

4. Newspapers and Magazines

Reading at least one good English newspaper is a good practice. You can read news of your interest, but reading editorials will be very useful. When you read a newspaper, keep a notebook and write in it difficult words which you come across. Find out the meanings of these words, and look at their usage. You can take the help of your English teacher in case of any doubts. It is a good practice to read at least one English magazine. It could be a current affairs magazine, competitive magazine or a technical journal.

5. Novels and Books of General Interest

You need to inculcate in yourself the habit of reading such books as are not part of the syllabus. These could be novels, books of general

interest and books by famous personalities.

Some of the books which have influenced me and made me what I am today are:

- (a) Gurudev Tagore's 'Gitanjali', Mahatma Gandhi's 'My Experiments with Truth', writings of Pt. Nehru like 'The Discovery of India', 'Glimpses of World History', 'Bunches of Old Letters'; 'India Wins Freedom' by Maulana Azad; Premchand's short stories; Maithilli Sharan Gupta's poems; Subhadra Kumari Chauhan's famous poem 'Jhansi Ki Rani'; Deoki Nandan Khatri's famous 'Chandra Kanta' series of novels (because of which many people in India learnt Hindi), and R.K. Narayan's 'Malgudi Days' and 'The Guide'.
- (b) Winston Churchill's Second World War related books e.g. 'The Gathering Storm'; 'The Rise and Fall of the Third Reich' by William H. Shirer; 'A Mission with Mountbatten' by Alan Campbell-Johnson
- (c) Novels by Earl Stanley Gardner written in simple understandable English in which famous characters Perry Mason, Della Street, Paul Drake and Hamilton Burger existed; novels by Agatha Christie; Novels by P.G. Wodehouse with the immortal character of Jeeves; Autobiography of Nevil Shute who was an aeronautical engineer, 'Slide Rule' and his novels written in simple English in which engineering and technology themes were also discussed e.g. 'No Highway', 'Round the Bend', 'The Far Country', 'On the Beach' and 'Trustee from the Tool Room'; Novels by Arthur Hailey with specific industry in focus e.g. 'Airport' (Airlines), 'The Final Diagnosis' (Hospital), 'Hotel', 'Moneychangers (Banking)', 'Wheels' (Automobile), 'Overload' (Power) and 'In High Places'.
- (d) Parkinson's law' and other writings of C. Northcote Parkinson and Stephen Covey's book 'The 7 Habits of Highly Effective People'.

6. English News Bulletins

Although things have changed considerably, English News Bulletins on All India Radio and BBC are still the best sources for learning 'how to speak' and 'how to pronounce different words'. You could possibly keep in your daily routine 15 minutes time for listening to English news on All India Radio. Additional bonus in this case will be that you will come to know about current news in the country and the world.

7. Small Group Formation

Many of you are from Hindi medium schools with a rural background, and may be from a family from which you are the first one to come to a college. You may suffer from an inferiority complex. You have to get over this complex. This complex may be because you are not good at speaking and writing English. Many students have formed small groups for the purpose of improving English. These groups meet at a scheduled place and time every week, and practice speaking English. They also undertake writing assignments. You can try this 'group model' to improve English and for other self-improvement activities. If you can include in the group some students who are better than you, you can make faster progress.

8. Preparing for GATE Examination

GATE (Graduate Aptitude Test in Engineering) examination is

becoming extremely important these days. This examination is a gateway for admissions in post-graduate programmes in IITs. Also students having a good GATE score can get scholarships for pursuing post-graduate programmes in many other institutions. The GATE score is also being used for screening for employment by many public sector undertakings. Some examples are Bhabha Atomic Research Centre, Bharat Heavy Electricals Limited, Indian Oil Corporation Limited and National Thermal Power Corporation Limited.

A study of GATE syllabus and question papers will show that the GATE paper will have approximate percentages from; I Year: 10%, II Year: 40%, III Year: 35% and IV Year: 15%. If you are interested in the GATE examination, you can't wake up in the VIII semester or after the VIII semester examination, and then start preparing for GATE examination. Joining a coaching institute can't be of any help at this stage, as they don't have any medicine which can cover a four year course within a few months or so. This means that you need to prepare for GATE examination from the first year itself.

9. Preparing for Engineering Services and Other Central Services Examinations

Many of you would like to appear in Engineering Services Examination. This examination is conducted by the Union Public Service Commission (UPSC) every year for Class I posts under the Central Government. Preparation for this will also be similar to GATE. The only difference is that First year Mathematics is not needed in this examination at present. Attention to engineering subjects of the first year and then second year onwards will be essential for success in this examination.

You will also have to pay attention to other requirements for Engineering Services from the first year itself. If you plan to take UPSC examinations for other administrative services like IAS, IPS, and IFS, you need to plan from the first year itself.

10. Individual SWOT Analysis

SWOT means Strengths, Weaknesses, Opportunities and Threats. It may be a good idea to do your own self evaluation, and find out what your strengths and weaknesses are. You must further strengthen your strengths and work seriously towards reducing your weaknesses. You also need to look at the opportunities available to you and threats which might hinder or stop you from taking advantage of available opportunities.

Methodology of individual SWOT analysis can be learnt. Some guidance can be taken from [1] and [2].

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SMALL THINGS COUNT

Life is made up of little things—little things that count a great deal and are of great importance in our relationship with ourselves and in our relationships with others.

Let us first consider our relationship with ourselves. Along with earning good grades, we must take proper care in our life to see that the little things regarding our personal life are in order. We must learn to care for our health and our mental well-being. Our bodies are truly the result of what we eat and the exercise we receive. If we are not wise, these little things can soon catch up with us to become major health problems that will limit our success and contribution.

Many students feel that proper rest is not an important concern at this time in life. Some suffer from too little sleep, and some suffer from too much. This might seem like a little matter to now, but the wise student soon learns the value of regular hours and sufficient sleep.

Some of the most common little things in our lives are the minutes that pass in each hour of the day. For each human being, time is indeed an indispensable resource. It can neither be ignored nor altered. We are compelled to spend it at a fixed rate of sixty minutes every hour. The question is not one of managing the clock, but one of managing ourselves with respect to the time we have. Time is "man's most perishable resource," and unless it is managed, nothing else can be managed.

With regard to our relationships with others, we first analyze our relationship with our best friends—our parents? Do we regularly call them or write them a note to express our love and keep them informed of our progress in life? Do we communicate with them simply to say, "I honour you and I value your teachings and example"? The commandment to honour father and mother does not cease when we celebrate our eighteenth, twenty-first, thirtieth, or even sixtieth birthday.

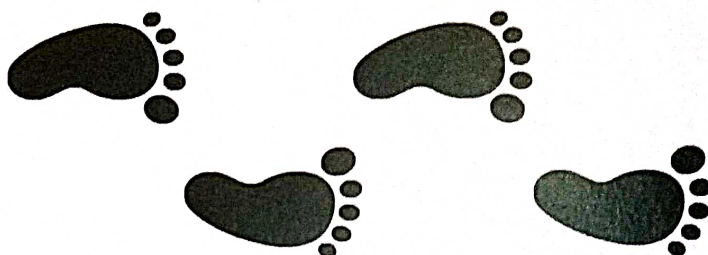
The important little things that merit our attention are the small acts of service we perform for our fellowmen. Do we take the time to remember some of the simple courtesies that are so important in our efforts to build personal regard and graciousness in relationships with others? Do we remember the smile, the compliment, the positive note, and the word of encouragement? We should do these important little things without hesitation. They should be a part of our everyday manner as we groom ourselves socially in these critical young-

adult years.

These little things, which, in reality, become such big things, bring perspective to our lives as we learn to conquer them one by one in our effort to gain more and more strength.

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Reader, Dept. of Mathematics



FOOTPRINTS....

Some people leave an indelible mark on our lives. Most often such people have taken the road less travelled and challenged the orthodox way we usually take. Irrespective of the length of their life, they were an asset to humanity.

If we glance through the pages of history, we find shining examples of people whose lives have revolutionized the world. Some were born to direct us towards spirituality. Others like Mahatma Gandhi emphasized the non violent way of life. Ann Frank, an ordinary teen age girl, became a symbol of the common people falling a prey to man's inhuman cruelty. But despite the most testing conditions Ann retained optimism about life.

There were people who made their presence felt even after they had left this world. They gave their lives to protect people they didn't even know. The ninth Sikh guru Teg Bahadur Ji sacrificed his head to save the janeu of Kashmiri Pandits. A group of Kashmiri Pandits approached him to save them from forcible conversion to Islam. On the advice of Guruji, they told the Mughal emperor Aurangzeb that they would willingly accept Islam if Guruji did the same. Orders of his arrest were issued in no time. He was kept in custody for over three months and ordered to be tortured till he accepted Islam. As he stuck to his guns, he was beheaded in Delhi. He made the supreme sacrifice to save the religion of the unknown Kashmiris. He came to be called 'Hind ki chadar', i.e., 'the shield of India'.

So it's not how long you live, but how well you live and what you leave behind for others that matters.

We have miles to go before we say adieu. What is your contribution for a better world?

Jaspreet Singh

II B.Tech., Dept. of ME

BEGGARLAND?

Of the so many mischiefs rampant in India, there is none which has been prevalent since the days of Adam and Eve but begging. Hindu religious books describe it as an honourable means of support for spiritually inclined people to enable them to focus exclusively on spiritual development without the possibility of being caught in worldly affairs. India is a land of saints and begging is a usual scene here. In ancient times, it was the saints alone who begged. Now, it's the folks living in slums and on footpaths who pester people for food or money. It has become a regular profession for them because that's how they earn their livelihood.

The modern beggar is a man with a difference. It is said that if wishes were horses, beggars would ride them. The first kind of modern beggars are literate and even earn a modest salary. But they have barrels of wishes like possessing a brand new car or a bungalow in a metro city. They even offer sweets, money or gold to their deities to get their coveted dreams fulfilled.

There is another class of people whose wishes are limited to grades or marks. Recall the ashen visage of a student during exams; it does not look different from that of a beggar. Some modest students pray for just pass marks while the ambitious ones beg for top ranks. Grades or marks do not reveal our true intellect. Look at Einstein's case. He was a mediocre student but later on became an excellent scientist.

Generally an author is considered to have a profound knowledge about his subject. There was a time in India when great thinkers like Aryabhatta and Bhaskara would not even mention their names in their books which were known for the lofty quality of their contents. Today's authors copy each other to produce pass books or cheap notes. But they don't fail to flaunt all their degrees on these shameful compilations which don't have an iota of thought in them. This is an example of our intellectual beggary.

There is an elite class of beggars found these days. They can be seen only at the time of elections; after that they vanish for the next five years. These beggars beseech you for votes. You have guessed it right; they are our politicians, the major cause of all our problems today, from corruption to poverty. But they flourish and turn us all into beggars.

Let the youth vow to rid the country of all types of beggars.

Rahul

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BEING BORN AS A GIRL IN INDIA IS A SIN

In 1921 Mahatma Gandhi said, "Of all the evils for which man has made himself responsible, none is so degrading, so shocking or as brutal as his abuse of the better half of the humanity, the female sex (not the weaker sex)".

Yet not a day passes when unspeakable crimes like rape, gang-rape or simple butchering of victims are not reported from bustling cities or solitary villages. There seems to be no safety for women of any age group, unless they are protected by bodyguards.

In India, girls and women continue to be sold as goods, married off as young as 10, burned alive for dowry, exploited and abused as domestic or farm labour and housewives subjected to domestic violence.

Apart from these horrid crimes, women are teased in public places, in the middle of a crowd. In the national capital, it is unsafe to venture out after dark if you are a girl. In this male dominated society, people have no respect for women, no respect for culture; and as far as the law is concerned, people are least bothered. Currently there are no effective laws in India against sexual assault or harassment.

The maximum punishment for insulting or outraging the modesty of a woman is a year's imprisonment and fine. Even for a case like the one in Assam which occurred a few months ago, a girl was publicly dragged on the road by a mob of 20 people who ripped off her clothes and smiled at the camera that filmed it. Out of the 20 accused only 11 were sentenced for just 1 year imprisonment.

India was declared the worst place for a woman in the G20 countries and the 4th worst place in the world by UNICEF.

A research by UNICEF in 2012 found that 52% of adolescent girls and 57% adolescent boys think it is justified for a man to beat his wife. A preference for sons and the fear of having to give a hefty dowry has resulted in 12 million girls being aborted over the past three decades.

Even after rape and harassment cases, instead of giving maximum punishment to the accused, girls are cautioned on how they should dress. Women are blamed for their dress and demeanor. A single independent woman, if she goes to bar or wears attractive clothes, is said to be giving an invitation for crimes like rape, and these remarks comes from senior female leader or officials in the government.

Moreover fearing restrictions on their mobility, young women often hesitate to report such incidents to their family; and if they do, they are often discouraged from filing official complaint to the police. Frustrated with the injustice and long pending cases, while the accused roam around free, victims of rape or acid attacks often commit suicide or wish for death. Shonali Mukharjee, once a pretty cadet with large eyes and larger dreams, tried to resist eve teasers and rejected a proposal for marriage, and acid was splashed on her face. Her face was disfigured; she is blind, partially deaf. Adding to her grief, the accused got bail and are back on streets, regularly threatening her.

We all know that India is the land of Draupadi, Sita, Lakshmi. We worship these goddesses. We point to all the wonderful things that the Gita, the Quran, the Bible, the Granth Sahib say about women.

Then we, Indian men, set unwritten limits for our women; and if they do not stay in those limits, we perpetrate the worst abuses against them. Crime against women needs to be curbed, or if the present growth rate in crime continues, people will be ashamed of calling India the "Bharat Mata", as the "Mata" or goddess herself may not be spared by monsters.

Ajay Raj
II B.Tech., Dept. of CE

YOU ARE UNIQUE. YOU ARE ORIGINAL

One's life mainly depends on three relationships: relationship with self, relationship with others plus the relationship with God. Life will be complete only when you develop yourself in all these three relationships.

Only if one enjoys good relationship with oneself, he/she can enjoy a good relationship with others also. Only when you learn to like yourself, world will begin to like you. Only when you learn to love yourself, you will begin to realise the love that others has for you. How the world see's you will make a small difference but how you see yourself will make the major difference.

Every seed has in it the potential to become a forest, every rock has in it the potential to become a statue and every human has in him the potential to become a legend. You just have to wake up the sleeping potential within you.

This birth as a human being is great blessing, so you must cherish yourself by thanking God for creating you as you and not as anyone else. Enjoy your originality. Never loose yourself to gain someone else. Live to express not to impress. The group that doesn't accept you as you is not your world instead; there is a unique world for each one of us, where you shall reign as king or as queen-by just being yourself. Find that world....in fact that world will itself find you.

You are here to be you....just you. You don't have to try anybody else. Be yourself and be the best at it. Don't miss yourself and let the world not miss you. Most people cannot appreciate others easily and they cannot handle it, when others appreciate them. How will you celebrate yourself, if you cannot even others appreciation of others? So next time when anyone appreciates you, say, "thank you" and praise yourself.

Always be the first to take initiative in all matters, be the first to take a step forward and be the first to make a wish, first to shake hands and extend a hug.

Above all celebrate your uniqueness. It doesn't matter if you are imperfect; you are still the only one of your kind. Compared to the size of our solar system, our planet earth is just a small part of it and on this earth h you are just a particle of dust. And yet in the entire of this universe, there has never been anyone like you; you are the only one of your kind. You are unique, original and a masterpiece, so simply live the way you are.

"YOU have only one life to live. Even if you are reborn, you will not be born as you. Don't miss this chance, don't miss yourself. It is better to earn a bad name and live a good life than to earn a good name and live a bad life.

"DARE TO BE YOURSELF."

Tripti Bhatra
IV B.Tech., Dept. of EC

"NET LAGAO, PYAAR BADHAO".

This year marks the dawn of a new league, The Indian Badminton League. The advertisement of IBL showcases badminton as a solution to all problems. We Indians too wish it to be so. IBL has been modelled on the Indian Premier League and this is surely going to revolutionize the game. Cricket has always enjoyed the status equivalent to a national game in India, but now everything is going to change. Badminton is now in limelight and the smashing success of Saina Nehwal and PV Sindhu at the world level will definitely prove to be the ideal launching pad for the IBL. Earlier in Cricket we knew only the 11- odd players of the Indian cricket team, but thanks to the IPL, we are familiar with 30 more names. The format of IBL will help in promoting the game and the players too. The format of IBL may also lead to corruption, as it did in case of cricket, but we wish that only love is involved here and nothing else, because IBL propagates the motto "Net Lagao, Pyaar badhao"

Tanvi Arora
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A CULTURE OF INTOLERANCE

Today we call ourselves a fast paced society and want everything to be done at the blink of an eye. Everything including speed cars, trains, the Internet, has become fast. As long as the rhythm of this fast paced life is maintained, it's fine. But the fact is that owing to this fast culture frustration creeps in very often. On the roads we drive recklessly and, stuck in traffic jams, keep blowing the horn. At home or in the office just let the Internet be slow, and we unleash our anger on the mouse. Though our swift pace of life has given us a sophisticated life style, it has also ushered in a culture of impatience. Today people are ready to stab each other on petty disputes. This short temperedness takes a toll on the youths. It has found its way in the society at large, making it intolerant. Hate crimes are on the rise. The recent Boston bombing illustrates the intolerance in two youngsters who resorted to extreme measures. The youth of today has become very vulnerable to this culture of intolerance and impatience. It will lead to deadly consequences if it is not brought under control in time.

We have reached a point where expressing a view or giving a critical feedback is considered to be a hostile gesture. We boast of being the world's largest democracy, but our fundamental right of freedom of

expression is threatened by a mindless mob. There is an itch to ban. A critical biography of the Maratha warrior Shivaji was forcibly got banned in Maharashtra. In addition, the institute where the author James Laine had done some research was vandalized. Salman Rushdie was restrained from attending the Jaipur lit fest for his three decade old controversial book. The Picasso of India, M.F. Hussain, was pushed into exile by some right wing extremists.

This type of behaviour is not democratic; it's rather a sign of an intolerant society. If something hurts your sentiment, there are courts to address the issue. Direct action is illegal and hooliganistic. Situations may pose problems, but the impatience with which we react makes them worse. Social changes may be called for, but they take time. No revolution in history, be it French, Russian or American, was a one night wonder. This impatience is rather the root cause of the growing depravity in our society. What is required is maintaining a balance between our actions and emotions. If that is lost, there will be total collapse.

Nivedita Jha

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OLIVE GREEN: STILL AN OPTION FOR YOUTH?

Once upon a time when songs like "Nanna munna rahi hoon desh ka sipahi..." meant a lot to the children, and parents too wanted their wards to serve the nation by joining the Indian Army. But time has changed now. The World's second largest army, the Indian army is badly facing a shortage of 14,000(nearly) officers in the force. Everybody praised the herculean effort of the Indian Army in which the army rescued over 20000 stranded people in Uttarakhand. But it is a fact that most of today's youths don't want to join this organization. Now the question arises: why are they not coming forward to join such a prestigious organization?

Despite the fact that army life is full of adventures, challenges, pride, honour and unmatched glory, the army is unable to attract the youth and joining it is not an enviable career choice. Parents objection, less pay and the apathetic attitude of the government towards the force is demotivating the hearts of youth. People are patriotic enough but still they give silly reasons to dissuade their children from joining the army, and most of the time squash their deserve to be a part of the armed forces. The real reason is that serving in the army means that your life is at risk to a considerable extent. People are not aware that nothing can ever replace the work which the army does. There is no dispute on the fact that engineering has hit the country very hard. In this era of competition, students give up their dreams and find themselves in coaching institutes to get admission in well known IIT's and NIT's and look for lavish packages. But one has to say that the attitude of the government is also very apathetic towards the army.

People can easily see that the families of martyrs are not respected and not given the facilities due to them. Though the government revised the pay scales after the sixth pay commission, it is a concrete reality that the pay in the army is abjectly little in comparison with the big risks involved in the army life. There is no doubt that the army provides an opportunity to rise above the ordinary. No field can match the adventurous, challenging and glorious life in army. Army provides an opportunity to improve the personality, and offers physical fitness and mental robustness. The Indian Army has also given many great sportspersons, viz. Major Dhyan Chand, Colonel C K Nayudu and Milkha Singh. In the recent years, our army has taken some steps to spread awareness about army lifestyle. Attractive advertisements can be seen on television which catch the interest of the youth. There are conferences and seminars by retired army officers. But still a lot needs to be done. Government should implement policies regarding martyrs families. Parents should encourage their wards to join the army. By combined efforts, I hope that the Indian army will overcome this blow and the youth will show its interest in joining this prestigious organization.

Lokesh Khoth

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HOW TO BECOME A SUPER ACHIEVER

A Muslim youth of my acquaintance, born in a village and madarsa educated, can speak two languages fluently- Arabic and English- without holding a university degree. I asked him once to reveal the secret of his unusual success to me. He uttered a single word, junoon or madness, signifying an unflagging determination to achieve one's target.

Everyone is born with some qualities. Potentially every person is a super person. What is required is an insatiable desire to turn this potential into actuality. Success is not a gift it is the result of one's own strife. If you want to be a super achiever, first recognize your own capabilities. Everyone is born with some unique qualities, and success depends on discovering this and then utilizing them with sound planning.

Always remember that you are created; you are not the creator. So there will be limitations. There is a law of nature that works in this regard. Be confident, but never lose your modesty; be clear about your target, but never try to achieve it at the cost of another person's success or piece of mind. You should be a good planner, but keep away from any kind of corrupt practices.

It is a fact that no one can overrule your ambitions, but at the same time you cannot overrule the laws of nature; so be a realist. Acceptance of the reality is the most important factor in any kind of success.

Priyanka Pathak

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HOW TO WIN FRIENDS AND INFLUENCE PEOPLE

If life is like living in a multi storey building, friends are certainly its elevators. They keep your feet on the ground when you are excited about a big achievement; and when you are down with depression, they boost your spirits. This special ability to buffer the extremities of life is what necessitates friends, though it is not easy to be the apple of everyone's eye. Here are some ways to assist you in your quest for this sweet relation called friendship.

- * Socialize more often. The best place to find and meet people is parties and events.
- * Don't consider yourself to be superior or inferior; say no to ego and inferiority complex. Neither flaunt your achievements too much, nor let your spirits down.
- * Talk impressively with wit and humour. It shows you off as a smart and affable person with whom it would be a pleasure to be friends.
- * Show interest in people; don't be self obsessed. Even if you are an egoist, you must care for the interests of others.
- * Don't dig into personal details; show interest in people, but never try to mess with something that is personal.
- * Never judge a man by his coat. Remember that looks, physique and language, the so called cultural inequalities, are never a barrier in friendship.
- * Be optimistic, admire positive traits. Developing an optimistic perspective towards any relationship makes it a cherished experience.
- * Always wear a smile. It's a curve that sets everything straight. A smile is a warm greeting that softens and extends happiness to the person being smiled at.
- * Don't fake; be real; be transparent. Avoid behaving like a split personality. Adopting some basic ethics makes you a lovable person.
- * Extend your hand first; don't hesitate to reach out first. Don't feel shy to communicate. Talk. For once you get to know each other, you might become the best of friends.
- * Remember what Cicero says, friendship can make adversity light and bearable by sharing it.

Pratyusha Mishra

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THE CURSE OF CHILD LABOUR

Childhood is the most innocent phase of a man's life. It is the phase when one is totally free from tension, when fun pervades every moment of one's existence. The world reveals its beauties one by one and the child's sole job is to enjoy them as they come. But alas, this is the story of only one part of the world. In the other part, the life of a child is full of tension and burden. Here the child is a working machine who must work all day long to earn enough money to buy something to eat. This is what is called child labour.

In India alone, there are around 14 million child labourers out of which 12 million are engaged in hazardous jobs. India has the highest number of labourers in the world under 14 years of age. These innocent children are forced by their economic difficulties to work at such an early age. The poor kids are the sole bread winners for their families. The root cause of child labour is poverty. There are many cases where a child has to work against the repayment of a loan which

his father had taken but was unable to pay off.

Child labour not only deprives children of their childhood and the basic right of education, it also has several other ill effects. Children are employed in hazardous works like bidi rolling, fire cracker making, bangle making, etc. where they have to work in unsafe conditions. This leads to various deformities and diseases. For example, thousands of children in the bangle industry not only lose their eye sight but also acquire physical deformities because of sitting in one posture for long hours. Not only this, the children are often beaten mercilessly by their masters. Many young girls are pushed into prostitution. The current situation is in reality worse than what we see.

Though there is a law in India which restricts child labour, it is seldom implemented in earnest. As long as poverty persists, child labour cannot be removed. Our attitude towards it is also a major problem. We may organize candle marches against it, but in our day to day life when we see a kid working at a tea stall or in someone's house, we simply overlook it and ask the child to bring a cup of tea. There are various organizations which are fighting against this evil by helping children, or imparting education in that part of society where the bulk of labour comes from. Poor families should also be given knowledge about family planning, so that they do not go on overburdening themselves with children. Also, we must not employ children as domestic servants. Let us all take some practical steps in this direction, so that we may bring smiles to many faces and make this world a beautiful place for a child to live in.

Rajat Paliwal

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SKIPPING FAMILY TIME

We all have become so busy surviving and earning a living or chasing our dreams that we hardly have any time for our family members, friends and dear ones; and when they complain about it, most of us have a common excuse, "I am busy this week and you at least should understand". And, even if by chance we have spare time, spending it on Face book or Twitter or watching TV is preferable to having a conversation with our close ones or helping them in their work. It is only due to the fading family values and insufficient time given to one another that distances are created between parents and their children, with relations coming to an end. We don't have the time to celebrate each other's achievements together, nor are we there for one another at critical times. We all have some duties that are really important and must be performed at the right time with respect to our children, parents, siblings and other relatives, in order to keep these relations alive and maintain a bond of love and care. Somewhere in our hearts we are all aware of things going wrong due to neglect; but to make things right we need time and the desire to prevent the bonds from breaking down. We all need to steal some time from our busy life to enjoy what God has already given us freely, and spend some moments of happiness with our loved ones. I am sure that if we try we can have some, so that whenever in the future we turn back we have some good memories of the past to cherish rather than memories of a rat race, which has failed to fulfill our endless desires till today.

Komal Motwani

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अभियात्रिका

‘जरूरत है सोच बदलने की’

हाल ही में हमारे देश में जो प्रकरण हुये हैं उनका जिम्मेदार कौन है? क्या सरकार? या फिर हम खुद?

इसी वर्ष पाकिस्तानी सैनिकों द्वारा भारतीय सैनिकों का सिर धड़ से अलग कर देना, चीनी सेना की भारतीय सीमा में घुसपैठ, हमारे 5 जवानों की हत्या, आजकल सुर्खियों में हैं। साथ ही देश की आंतरिक समस्यायें आर्थिक मंदी, घोटाले, महिलाओं की असुरक्षा भी कम नहीं हैं। ये सारी ऐसी समस्यायें हैं जिससे आज पूरे देश की जनता सकते में है और सवाल उठ रहा है देश की सरकार पर। इन घटनाओं के लिए देश की सरकार ही नहीं बल्कि हम लोग भी जिम्मेदार हैं, हम लोग सिर्फ अपने अधिकारों की ही बात करते हैं परन्तु देश के लिए हमारे जो मौलिक कर्तव्य हैं उन्हें भूल गये हैं। पूरे विश्व में भारत को बिकाऊ लोगों का देश कहा जाता है, यहाँ के लोग आज अपने छोटे से छोटे सुख के लिये भी अपना ईमान बेच रहे हैं और ये भूल रहे हैं कि उनकी इन्हीं छोटी सोच से देश की स्थिति खराब हो रही है। अगर हम सामान्य सी बात पर गौर करें तो आज देश की 70% युवा पीढ़ी सरकारी नौकरी की जुगत में रहती है क्योंकि हमारे देश में सरकारी नौकरी का मतलब है सिर्फ दफ्तर जाइये, हस्ताक्षर कीजिए और घर आ जाइए शाम होते ही वहीं गैर सरकारी संस्थाओं में जाना लोग आज अपनी बुरी किस्मत का संकेत समझते हैं।

हमारी इस कामचोरी, अजागरूकता और आलस्य के कारण ही देश गर्त में जा रहा है। अगर देश की सेना को छोड़ दें तो इस देश में ऐसी कोई जगह नहीं है जहाँ अनुशासन और जागरूकता है। हमारे देश की सेना विश्व की सबसे पराक्रमी सेना है और तकनीकी तौर पर दुनिया में तीसरे पायदान पर है। मगर इसकी परवाह किसे है, देश की युवा पीढ़ी तो आजकाल सिर्फ अपने बारे में ही सोचती है। उन्हें इस बात से कोई मतलब नहीं है कि आज वो सीमा पर जान देने वाले जवानों की वजह से ही सुरक्षित है। 1962 का भारत-चीन युद्ध, 1971, 1965, 1999 में पाकिस्तान के साथ युद्ध में सेना ने विश्वभर में अपना लोहा मनवाया। उदाहरण के तौर पर अगर 1962 के युद्ध में चीन की चालें अगर पुरी तरह से कामयाब हो जाती तो शायद आज हमारा देश राजस्थान तक ही सीमित होता, इस युद्ध में निर्णयक लड़ाई रेजांग-ला सेक्टर की थी जिसमें भारतीय सेना के 114 जवान शहीद हुये और उस मोर्चे को फतह किया। मगर कौन याद करता है? जब भी जवान सीमा पर खड़ा होता है तो वो यही कहता है कि भारतवासियों आप आराम से रहिये मैं आपकी रक्षा में यहाँ हूँ मगर जब वो जवान लड़ता हुआ शहीद हो जाता है तो इस देश के लोगो और सरकार का फर्ज बनता है कि उस शहीद के परिजनों की ओर देखे मगर आज भी बहुत से ऐसे शहीद हैं जिनके परिवारों को आज तक नहीं देखा गया।

अब अगर बात आर्थिक मंदी और महिलाओं पर अत्याचारों की लें तो इन सब के लिये भी देश की जनता ही जिम्मेदार है। हम लोगों की सोच के कारण ही ये सब होता है। क्या इस देश की लड़की को अपने अनुसार जीने का हक नहीं? ये सोच ही तो है कि हमारे देश में लड़की को मारा जाता है, जलाया जाता है। शरीर सबका अलग है मगर आत्मा सबकी एक है। इसलिए जो अवसर एक लड़के को मिलते हैं वो अवसर एक लड़की को व वो आजादी मिलनी चाहिए। लड़कियों को समाज नीचा समझता है इसलिये उनका शोषण होता है।

रही बात आर्थिक मंदी की, तो ये सिर्फ तभी कम होगी जब हम स्वदेशी उपयोग पर जोर देंगे और इससे देश पर अपनी निर्भरता कम करेंगे। हमारे पास सब कुछ है, बड़ी युवा शक्ति जो कि देश में मंदी के खिलाफ क्रांति ला सकती है। सरकार ने हाल ही में खाद्य बिल पारित किया है देश में गरीबी रेखा से नीचे जीवन-यापन करने वाले लोगों का पेट भरने के लिए। और वो पैसा मध्यमवर्गीय लोगों के टैक्स का है। जरा सोचिये जिस दिन मध्यमवर्गीय लोग भी भूख मरने लगे तो क्या होगा इस देश का? क्या हम सभी इसी दिन का इंतजार कर रहे हैं? और जागकर सिर्फ ये रोना रो रहे हैं कि सरकार खराब है। सरकार भी तो हम ही बनाते हैं और बेवकूफ हम ही बनते हैं। चीनी सेना की घुसपैठ, पाकिस्तान के मंसूबे ये सब तो सेना की दिनचर्या है और सेना इतनी सक्षम है कि इनसे निपट सकती है अगर सरकार आदेश परन्तु सरकार हम ही है जो अपने आप को गुमराह कर रहे हैं। कुल मिलाकर जरूरत है सोच बदलने की। जिस दिन भारतीयों की सोच बदलेगी उसी दिन से राष्ट्र हर क्षेत्र में उन्नति करेगा। सोच बदलना और राष्ट्र के प्रति सकारात्मक नजरिये में ही हमारी जीत है।

आदित्य शर्मा, तृतीय वर्ष, जनपद / सिविल अभियांत्रिकी

‘तब और अब’

गीली मिट्टी में बनें पहल-दूज और तपती दुपहरी के सतोलिया,
खो गये हैं कहीं, कम्प्यूटर और डोरेमोन में।

नीम का वो खड़ा पेड़, दूर गली से आती आवाजें, फालसे बढ़िया, अंगूर बढ़िया,
दूढ़े से भी नहीं मिल पाती, इन समर क्लासेज की भीड़ में।
हर कोई चला है बनने मास्टर अंग्रेजी का या डांस का,
नहीं चाहता कोई जाना, चाहे घर हो दादी का या नानी का।
कम हो गये हैं रिश्ते, शुद्ध हवा, शुद्ध पानी की तरह,
अब नहीं मिलते दर्जनों चाचा, मामा, मौसी मौहल्ले में परिवारे की तरह।
मुझे आज भी याद है, वो स्वाद, उन खट्टी मीठी गोलियों का, चने और रेवडियो का,
पर वो दुकानें भी देने लगी हैं प्रलोभन चॉकलेट्स और कोल्ड ड्रिक्स का।
खेला करते थे, गुड्डे-गुडियों की शादी, घर-घर का खेल,
पर अब घर का अकेला बच्चा कैसे खेले ये खेल।
रातों को सुनते-सुनते सोते, एक ही कहानी कई-कई बार,
कोई तो बताये, ये क्यों आया है, ऐसा बदलाव,
क्या जादू सा फैला है इस पार
भूल तो जाऊँ सब कुछ, पर नई हवा पर कैसे हो विश्वास
उमड़ घुमड़ कर, वो तो, तोड़ रही है, त्याग और प्रेम की आस।

डॉ. प्रमिला कुमावत, रीडर, गणित विभाग

‘जागो’

जागो प्यारे युवक जागो मिलकर अपना कदम बढ़ाओ।
गाँव गाँव और ढाणी ढाणी नई चेतना फैलाओ॥
हक के खातिर लड़ना सीखो अंधकार से परे उठो।
हिम्मत कर के चलना सीखो, अंधकार से जाग उठो॥
महंगाई की मारा मारी, चोर बाजारी, भूखमरी।
जात पात और भेदभाव है बड़े-बड़े भ्रष्टाचारी॥
सम्मान नहीं है माँ बहनों का ऐसे बैठे अत्याचारी।
ऋषि मुनियों की पावन धरती पर पाप बढ़ा है अब भारी॥
मातृभूमि पर राष्ट्र प्रेम की फिर से अलख जगानी है।
भारत माँ की लाज है रखनी चाहे जान गवानी।
मेरे प्यारे युवको जागो मिलकर कदम बढ़ाना है॥
याद करो उन वीरों को जो शहीद हुये इस धरती पर।
याद करो उन महापुरुषों को अवतरित हुये इस धरती पर॥
राम-कृष्ण इस धरा पे जन्मे, सबको तुम ये बतलाना।
जनसेवा का करो काम और देश भक्त तुम कहलाना॥
मेरे प्यारे युवको जागो मिलकर कदम बढ़ाना है॥
कहे सुरेश सुनो मेरे बन्धु ध्यान पर हित में ही रखना।
ये अमर जीव है मेरे नहीं ध्यान मर्यादा का रखना।
मेरे प्यारे युवको जागो मिलकर कदम बढ़ाना है॥

सुरेश चन्द मीणा, एस के आई टी, जयपुर

‘ मूक हूँ मैं ’

आज त्रिनेत्र—सा गुस्सा रहा उबल, प्रकृति का रूप है भयानक, प्रचंड, प्रबल।
उफन रही नदी, फट रहे हैं यह बादल, मौत की घाटी बना है पृथ्वी का यह अंचल।
आस्था, श्रद्धा का कल तक था जो सरोवर, आज है वहाँ लहरों पर नाचती मौत का मंजर।
धी जहाँ गर्मजोशी भरी चाय की चुस्कियाँ, आज है वहाँ सन्नाटे की थपकियाँ।
कह रही है क्या ये प्रकृति जरा सुनो, विकास के इन धौधलो को उपर से चुनो।
बदलते मेरे मिजाज के संकेत को सुनो, मूक हूँ मैं, पर तुम बधिर तो न बनो।

तन्वी अरोहा, तृतीय वर्ष, इलेक्ट्रॉनिक्स एवं संचार अभियांत्रिकी

‘ अंतिम पत्र ’

माँ से —

माँ तुम्हारा लाडला, रण में अभी घायल हुआ है, देख उसकी शूरता, खुद शत्रु भी कायल हुआ है।
रक्त की होली रचाकर, मैं प्रलयंकर दिख रहा हूँ। माँ उसी शोणित से तुमको अंतिम पत्र लिख रहा हूँ।
युद्ध भीषण था, मगर ना इंच भी पीछे हटा हूँ, माँ तुम्हारी ही शपथ, मैं आज इंचों में कटा हूँ
एक गोली वक्ष पर कुछ देर पहले ही लगी है, माँ कसम दी थी जो तुमको आज मैंने पूर्ण की है।
कह रहे हैं शत्रु भी, मैं इस तरह रौंदा हुआ हूँ, लग रहा है सिंहनी की कोख से पैदा हुआ हूँ
यह न सोचो माँ की मैं चिर नींद लेने जा रहा हूँ, मैं तुम्हारी कोख से फिर जन्म लेने आ रहा हूँ।

पिता से —

मैं तुम्हें बचपन में पहले ही दुख दे चुका हूँ, और कन्धों पर खड़ा ही आसमां छु रह हूँ।
तुम सदा कहते न थे, यह ऋण तुझे भरना पड़ेगा, पर पिता ! मैं भार अपना, तनिक हल्का न कर पाया,
तुम मुझे करना क्षमा मैं पितृ ऋण को भर न पाया, हूँ मजबूर, यह ऋण ले मुझे मरना पड़ेगा,
अन्त में भी आपके कन्धे मुझे चढ़ना पड़ेगा।

बहन से —

मैं तुम्हें बाँहों में भर, आकाश दे सकता नहीं हूँ, लौटकर भी आऊँगा, विश्वास दे सकता नहीं हूँ।
पर बहन ! विश्वास रखना, मैं नहीं थककर पड़ूँगा, तुम भरोसा पूर्ण रखना, सांस अंतिम तक लडूँगा।
छा रहा है सामने, अब आँख के आगे अंधेरा, पर उसी में दिख रहा है, मुझे एक नूतन सवेरा।
याद रखना रक्षा पर्व जब जब आएगा, भाई अंबर से नजर, चंदा सा तब—तब आएगा।

भाई से —

सुन अनुज रणवीर ! गोली बांह में जब जा समाई, ओ मेरी बांयी भुजा ! उस वक्त मेरी याद आई।
अब तुम्हीं को सौंपता हूँ, बस बहन का ध्यान रखना, जब पड़े उसको जरूरत, वक्त पर सम्मान करना।
मैं यहां कुलदीप के हित, शौर्य किस्से गढ़ रहा हूँ एक आंधी सी प्रतिज्ञा, उसके हिस्से कर रहा हूँ।
वंश की पावन धरोवर, अब तुम्हीं को सौंपता हूँ, और दुश्मन की गोली, बन प्रभंजन रोकता हूँ।

पत्नी से —

अंत में तुमसे प्रिय ! मैं आज भी कुछ मांगता हूँ, माँग में सौभाग्य के, अनगिनत सितारे टाँगता हूँ।
तुम अपने सौभाग्य की, बिंदिया सदा माथे सजाना, हाथ में चूड़ी पहनकर, पाव में मेहन्दी रचाना।
तुम नहीं वैधव्य की प्रतिमूर्ति या की साधिका हो, तुम अगर बलिदान की पुस्तक की पावन भूमिका हो।
तुम अकेली हो नहीं, इस धैर्य को खोने न देना, भर उठे दुख से हृदय, पर आँख को रोने न देना।
सप्त पद की यात्रा से, तुम बनी अर्धांगिनी हो, सात जन्मों तक बने जो, तुम अमर वह रागिनी हो।
इसलिए अधिकार तुमसे, बिन बताए ले रहा हूँ, माँग का सिंदूर तुम्हारा, मातृभूमि को दे रहा हूँ।

राजदीप सुखवाल, तृतीय वर्ष, इलेक्ट्रॉनिक्स एवं संचार अभियांत्रिकी

‘ मेरी माँ ’

सुबह शाम हर उम्मीद माँ। मेरी हार और जीत है माँ।
तन में माँ मन में माँ। जीवन के हर क्षण—क्षण में माँ।
हर शब्द और आवाज में माँ। मेरे दिन और रात में माँ।
मेरे विरह और मुलाकात में माँ। मेरे सपनों और ख्यालात में माँ।
मेरे लगाव और विरक्ति में माँ। मेरे तन मन की शक्ति है माँ।
मेरी शिक्षा संगीत है माँ। तुझसे ही मेरा जीवन रंगीन है माँ।
मेरी बातों और इशारों में माँ। मेरी नजरों में नजारों में माँ।
मेरे लिए फूलों की महक है माँ।

घिड़ियों की चहक—चहक है माँ। मेरे चलने की राह है माँ।
मजिल पाने की चाह है माँ। सावन और बरसात में माँ।
खुशियों और त्योंहारों में माँ। जागने से सोने तक में माँ।
पीने से खाने तक में माँ। इन हवाओं के दबाव में माँ।
पानी के प्रवाह में माँ। मेरे लिए गीता और कुरान भी माँ।
मेरे लिए अल्लाह और भगवान भी माँ।

राहुल बागला, प्रथम वर्ष, मैकेनिकल अभियांत्रिकी

‘ स्वागत है एस के आई टी के प्रांगण में ’

दोस्तो स्वागत है एस के आई टी की दुनिया में,
जीवन के प्रांगण में, कर्मभूमि के आंगन में, होसलों को उड़ान देने
पछियों को आकाश देने, विश्व को पैगाम देने,
स्वागत है स्वागत है एस के आई टी के प्रांगण में

तारों से सर्किट की, मशीनों से पीसी की, दीवारों से आशियानों की दुनिया में
स्वागत है स्वागत है एस के आई टी के प्रांगण में
न्यूटन से कॉरियर को गति के से तूफानों को अंजाम देने
हिन्दी से अंग्रेजी को जवाब देने, टेक्नोलॉजी से दुनिया को आयाम देने
स्वागत है स्वागत है एस के आई टी के प्रांगण में

कहाँ—कहाँ से आये हो तुम चल के, कोई बंसल सीपी से घिसके
कोई ऐलन तो कोई रेजो से उठ के, कोई रोते तो कोई हंसते
पर वादा है हमारा सब जायेगें हंसते हंसते
अपनी बात, हम भी आये थे तुम्हारी तरह चलते चलते
कुछ रोते तो कुछ हंसते हंसते, बसा ली यही इक दुनिया
अब नहीं आते आँसू चलते चलते हंसते हंसते

मिड टर्म के संगीत से घबराना नहीं, रिजल्ट पे भरोसा जताना नहीं
तुम होंगे कामयाब बस लेक्चर से कभी कतराना नहीं
घर की दिल में याद रहे माता पिता की उम्मीदें सरताज रहे
कोलेज की डोर थामके नये सपने बुनने की ताक रहे
जाते जाते दो शब्द और बोल दूँ वो पीठे शब्द और जोड़ दूँ
प्यासे को पानी की तलाश होती है सूखे को सावन की आस होती है
एक इंजीनियर को इन्वेन्शन की तान होती है
जोश कही ठंडा ना हो जाये इस कथन पे समाप्त मेरी बात होती है

सौरव चौधरी, तृतीय वर्ष, यांत्रिकी अभियांत्रिकी

‘ मेरा हिन्दुस्तान ’

मुसलमां और हिन्दू की जान, कहाँ है मेरा हिन्दुस्तान
उसे मैं बूढ़ रहा हूँ, जहाँ थे तुलसी और कबीर
जायसी जैसे पीर फकीर, जहाँ थे मोमिन, गालिब भीर
जहाँ थे रहिमन और रसखान, उसे मैं बूढ़ रहा हूँ।
मुसलमां और हिन्दू की जान, कहाँ है मेरा हिन्दुस्तान, उसे मैं बूढ़ रहा हूँ।
ये उर्दूलय में हिन्दी गीत, कहीं वो प्यार कहीं वो प्रीत
पहाड़ी झरना का संगीत, उसे मैं बूढ़ रहा हूँ, मुसलमां और हिन्दू की जान
ये पागलपन मजहबी जुनून, आग ही आग, खून ही खून, कहाँ ईसाफ, कहाँ कानून
उसे मैं बूढ़ रहा हूँ, मुसलमां और हिन्दू की जान,
न बांग्लादेश, न पाकिस्तान, वो तो पूरा-पूरा हिन्दुस्तान
कह मिल जाये इन्सान, जिसे हो मानवता का ज्ञान
उसे मैं बूढ़ रहा हूँ, मुसलमां और हिन्दू की जान।

नीरज कुमार, तृतीय वर्ष, इलेक्ट्रॉनिक्स एवं संचार अभियांत्रिकी

सबसे पहले इस खुबसूरत से शहर को चार पंक्तियों के माध्यम से सलाम करता हूँ:
इस वतन के गुलाबी शहर को सलाम, फूल खिलता रहे ऐसा पाये मकाम
खुशबूओं से भरे यह वतन सबका मन, कि हर चमन-ए-वतन कर सके एहतराम।

‘ वीरानगी ’

रात चांदनी बाहों में, फूलों की खुशबू लाती है
ऐसी सुंदर रातों के, रूखसत में नींद आती है
कुदरत की बाहों में इक, अनजानापन ही हाथ लगे
बादल के आने से जब, उम्मीद सारी धूल जाती है।
घर के छत पर बैठा गुमसुम, हर नज्म चुभन सी भाती है
चांदनी रात की ठंडी हवा, तन को झकझोर के जाती है
ऐसी दिलकश रात में इक, वीरानापन ही हाथ लगे
आँखें बंद करूँ तो अंधेरा, खोलूँ तो मजाक उड़ाती है॥
सावन की काली घटा, इक साथे सी मँडराती है
पानी होंठ को छूता है, पर प्यास नहीं बुझ पाती है
सागर की बाहों में इक, सूनापन ही हाथ लगे
सनन-सनन चलती है हवायें, तन में अग्न लगाती है।
शबनम की बूंदें सर पर, इक ठंडक सी पहुँचाती है
जुगनू की झिलमिल दिल को, कुछ पल तक बहलाती है
फकत ज़िंदगी, मौला से, करती है, इतनी से इत्तिजा
सुबह हो गयी गर जल्दी तो, जुगनू की कमी सताती है।

यशपाल कुमार, द्वितीय वर्ष, इलेक्ट्रॉनिक्स एवं संचार अभियांत्रिकी

‘ सुमित्र और कुमित्र ’

वर्तमान समय में जब परिवार में एक या दो भाई-बहन
होते हैं तब मित्रता का संबंध अत्यधिक महत्व रखता
है। रामचरित्र मानस में तुलसीदास जी ने अच्छे व
बुरे मित्र को अत्यन्त प्रभावी तरीके से लिखा है।

कुपय निवारि सुपय चलावा। गुन प्रगटे अवगुनहि दुरावा॥

मित्र का धर्म है कि वह मित्र को बुरे मार्ग से रोककर अच्छे
मार्ग पर चलावे। उसके गुण प्रकट करे और अवगुणों को
छिपावे।

देत लेत मन संक न धरई। बल अनुमान सदा हित करई॥
विपति काल कर सतगुन नेहा। श्रुति कह संत मित्र गुन एहा॥

देने-लेने में मन शंका न रखे। अपने बल के अनुसार
सदा हित करता रहे। विपत्ति के समय में तो सदा
सौगुना स्नेह करे। वेद कहते हैं कि श्रेष्ठ मित्र का ये लक्षण है।

आगे कह मुहु वचन बनाई। पाछे अनहित मन कुटिलाई॥
जाकर चित अहि गति सम भाई। अस कुमित्र परिहरेहि भलाई॥

जो सामने तो बना-बनाकर कोमल वचन
कहता है और पीठ पीछे बुराई करता है तथा मन में कुटिलता
रखता है- जिसका मन सोंप की चाल के समान टेढ़ा है, ऐसे
कुमित्र को तो त्यागने में ही भलाई है।

डॉ. शारदा सोनी, रीडर, रसायन विभाग

‘ जीने का आधार ’

कहाँ है मिट्टी के वो घर, गोबर से पूँजी दीवारें
पेड़ों के वह झुरमुट, उन पर गाते पक्षी प्यारे॥

फूलों का रस लेती तितली, बैठी पंख पंसारे
कहाँ है रैहट की आवाजें, खेत, खलिहान हमारे॥

मिट्टी की वह सौहंदी खुशबू, जब पड़ती बौझरें
कल-कल बहते झरने, गीत सुनाते प्यारे-प्यारे॥

नई नवेली दुल्हन का जैसे, लुट गया श्रृंगार
छीन लिया मानव ने खुद से, जीने का आधार॥

राहुल, द्वितीय वर्ष, यांत्रिकी अभियांत्रिकी