Swami Keshvanandji

THE SKIT TIMES
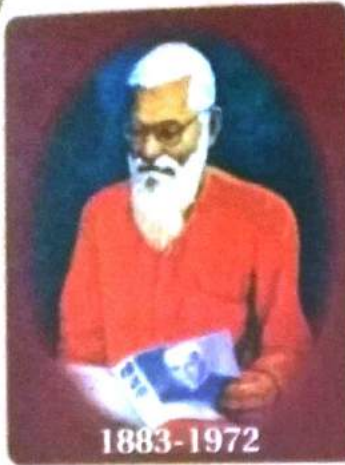
Annual Issue
May, 2007

SKIT
असतो मा सद्गमय

Our Path Founder

SWAMI KESHVANANDJI : A SOCIAL CRUSADER

1883-1972

Swami Keshvanandji

Swami Keshvanandji, an apostle of awakening, knew it very well that if society is not liberated from its social evils, the freedom from the British rule will be completely hollow. That is why even during freedom struggle Swamiji was more concerned about social reform.

The practice of osar (feast on the twelfth day of somebody's death) plagued the society very bitterly. Swamiji felt that this evil trapped the people in the vicious circle of poverty because this expensive practice was mandatory for all poor or rich. To abolish this Swamiji travelled to almost every village of his region. On September 14, 1942, at the occasion of silver jubilee celebration of Gramothan Vidyapeeth, he got a resolution passed opposing osar by the people of Vidyapeeth. The anti-osar resolution was sent to Ganga Singh, contemporary king of Bikaner, urging him to abolish the century old practice at the earliest possible time, In 1943 the newly coronated king of Bikaner, Sadul Singh, gave his consent to the Bill.

Swamiji himself have had a bitter taste of the evil of caste discrimination in his formative years of life when in 1904, he was denied education of Sanskrit due to belonging to some particular caste. So he had to take bhagwadesh (become a saint), which proved a blessing in disguise but he always considered this sort of discrimination, a form of untouchability. At Gramothan Vidyapeeth he never allowed the caste system to prevail, on the other hand he encouraged the people of discrimination castes to take up various jobs at Vidyapeeth and he ensured them the opportunities of education and self dependence. One such example is Dharm Pal, a sweeper of Vidhyapeeth who latter rose to the position of MLA in the assembly of Rajasthan and his children and grand children attained higher positions in bureaucracy. Recognising Swamiji's contribution he says :

Our priests and holy tell us that a man of good deeds goes to heaven after death. But by the grace Swamiji, I am very much enjoying heaven in my life-time itself.

Another such evil practice was the habit of drinking. Swamiji agreed with the slogan of Gandhiji, 'If India is to live, it must forgo the revenue derived from liquor. For the prohibition of liquor he launched a mass movement. A lot of literature and posters regarding prohibitions were distributed and exhibitions were organised.

The poverty-ridden people of Keshvanandji's region were further victimised by expensive marriages and when marriages became completely unaffordable they gave rise to unmatched marriages. The difference of the age between bride and the bridegroom was generally big, ultimately resulting in the increase of widows. Swamiji often wondered with a heavy heart 'how a society can progress when it is being burdened by increasing number of young and innocent widows. 'He not only condemned the lavish parties and unmatched marriages, but also did his best to educate its victims to get rid of such evil practices and emphasised over the use of this money on constructive plans and programmes.

Swamiji knew pretty well that to thinking of abolition of these social evils without the spread of education was like beating around the bush. So he attempted to make sure that education be made available to the underprivileged section of the society, be it women or village folk.

DIRECTOR'S COLUMN

I assure you that we will leave no stone unturned in advancing the existing and creating new teaching aids with the advancement of science and technology, so that we can keep pace with the global standards of quality education.

Dear Readers,

It gives me immense pleasure to see one more annual issue of SKIT Times in your hands, giving the glimpses of the achievements of the institute in different fields on one side and providing a platform to the students and faculty to exhibit their talents on the other side.

Academic institutes play a vital role in providing good and healthy environment for all round development of students and train them for nation building. That's what SKIT is contributing to in a significant and efficient way. SKIT can justifiably boast of its students and faculty with unmatched talent and infinite potential. It is a window to view the standard, status and quality of technical education that must be imparted everywhere.

In a proper infrastructure, teachers put in all efforts at their end to impart the best education through modern techniques and by inculcating right values to develop a mind set of highest aims and ways to achieve them.

Besides the efforts of the college, environment at home is also another decisive factor for proper upbringing of a student. A little carelessness and negligence on part of parents may decelerate the progress of a child to any extent. Hence, co-operation of parents has always been my expectation.

I congratulate whole heartedly all the members of the editorial board who have taken all pains in editing and giving a new shape to the magazine. My sincere appreciation to all students and faculty members who have given their contributions to exhibit their multifacet talents.

With a belief to rise higher and higher everyday, I extend my good wishes to one and all.

K.R. Bagaria

Principal Speaks

The mission of the institute is to create and generate opportunities for a better and brighter future of its students.

I'm extremely delighted to bring forth the next annual issue of SKIT Times, which would soon be in the hands of the students, giving the glimpses of the achievements of the Institute. Academic institutes play a very vital role in grooming the overall personality of the students, on whose shoulders lie the responsibility of transforming our country from developing to developed nation.

Technical education during the last decade has witnessed a phenomenal growth in the state of Rajasthan. This has happened due to the pains taking efforts made by academicians and visionary entrepreneurs. Till a couple of years back, the Government aided institutes were the first choice of the parents for admissions of their wards. Situation has now reversed.

I am proud to say that SKIT is now the first choice of the parents for their wards. Today SKIT is taken as a synonym for technology and success. It has all happened due to the dedicated faculty and the hard work put in by the students and the excellent performance exhibited by its alumni at the places of their works. The Institute will continue to strive hard to achieve its mission by providing all its students opportunities, to develop and prove themselves to the leading Indian and multi-national industries and secure their future at an early stage.

I wish all the students and faculty a prosperous and successful future.

S. L. Surana

Prof. S.L. Surana

Editorial

food for thought

It's that time of the year when again the good-byes and take cares become common place. It's that time when 'Mr. Boss' 'Ms. Bosses' of the sections start their BTPs and go nocturnal to avoid the baccha company that prowls around accousting them for treats and finally it's time for me to write about SKIT times in a crumpled corner that's left for me. I am proud that the magazine has now completed over half a decade of successful existence on campus.

By the grace of almighty, under the able guidance of the teachers, strict vigil of our dynamic college management and of course concerted efforts of the students, the college is inclining towards pinnacle.

The issue of magazine is a window to peep into mighty minds of future engineers, technocrats, educationists and what's not.

What this edition of SKIT times characterises is 'life'. It is real, varied, colorful, rewarding and as cruel as life itself.

Some compositions may seem a little immature but perfect care is taken not to tamper with original thoughts. The artists are motivated to take care though, as

> "Care that is hearfelt once into the
>
> breast will have the whole possession,
>
> ere it rest."
>
> - Ben Johnson

It has been my honour to be the Chief Editor of SKIT times, to work with so brilliant individuals and to be a part of a family. But as good things come to an end so is this part when I have to say my Good Bye.

Best Wishes for bright future.

Shweta Rathi

(Chief Editor)

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encapulating the treasure

Communiqué

inscription of happenings on SKIT arcadia

Excellent Placements

SKIT Training and placement cell is performing excellent under the aegis of Prof. M.L. Bhargava, a noted expert from industry and former Chief General Manager, RIICO. The cell is committed to prepare industry ready professionals and is putting in efforts for imparting all kinds of skills which are needed for working in the corporate world and to establish an effective interface with the industry. During the current academic session, the cell has fetched fabulous placements for 2007 batch with the following companies / industries so far :

Name of Company	Selection so far
1. Infosys Technologies Ltd., Bangalore	15
2. IBM India Pvt. Ltd., Gurgaon	08
3. Syntel INC, Mumbai	01
4. Satyam Computers Services Ltd., Hyderabad	11
5. i-flex Solutions Limited, Mumbai	08
6. Impetus Infotech India Pvt. Ltd., Indore	02
7. Crompton Greaves Ltd., Mumbai	01
8. Larsen & Toubro Limited (e-engineering), Mumbai	4
9. HCL Technologies Ltd., Noida	30
10. L&T Infotech Ltd., Mumbai	3
11. Interglobe Technologies, Gurgaon	6
12. PharmARC Analytic Solutions, Bangalore	5
13. Wipro Technologies Ltd., Bangalore	2
14. Indian Air Force, Dehradun	1
15. US Technology, Chennai	2
16. Tag Technical Services Pvt. Ltd., Ludhiana	2
17. HDFC Bank, Jaipur	2
18. Life Business Projects, new Delhi	38
19. Secure Meters Ltd., Udaipur	2
20. Wipro BPO	1
21. vCustomer Service India Pvt. Ltd., Delhi	9
22. ICICI Prudential's, Mumbai	3

The placements for the 2008 batch have already begun and following companies / industries have conducted campus placements till now :

Name of Company	Selection so far
1. Accenture Services Pvt. Ltd., Bangalore	32
2. Birlasoft Ltd., Noida	09
3. i-flex solutions Ltd., Mumbai	10
4. Impetus Infotech India Pvt. Ltd., Indore	2
5. Infosys Technologies Ltd., Bangalore	26
6. L & T Infotech, Mumbai	6
7. L&T Ltd. (e-engineering Solutions), Mumbai	5
8. Persistent Systems Ltd., Pune	9
9. PharmARC Analytic Solutions, Bangalore	1
10. Satyam Computers Service Ltd., Hyderabad	9
11. SYNTEL INC, Mumbai	12
12. Tech Mahindra Ltd., Pune	38
13. Torry Harris Business Solutions, Bangalore	4
14. U S Technologies, Chennai	6
15. Kanbay Software (India) Pvt. Ltd., Indore	7

PRAVAH 2007

Pravah 2007, National Level Inter Collegiate Technical, Cultural and Sports Competition was organised from 27th February 2007 to 1st March, 2007. Pravah-07 was inaugurated by the Cheif Guest, Dr. Suman Kapoor, Professor, BITS Pilani. Shri Sanjay Jain was the Guest of Honour for the inauguration.

The inter college competitions included "Techno Kreats" Technical Paper Presentation, Management Icon, Brainmine, On the spot software development contest, "Art of Techno" Competition cum Exhibition, Cultural Events, "Kavya Sarita" Kavi Sammelan "Perspectives" English Debate, Hindi Debate and Sports (Basket Ball, Volley Ball and Table Tennis). Techno-Kreats includes the papers in the field of Computer Engineering, Information Technology, Electronics & Communication Engineering, Electrical Engineering, Mechanical Engineering and Pharmacy. On the Spot Software Development contest included problems related to C, C++, VB and Java.

Brain mine includes a vast variety of knowledge ranging from history to current affairs, sports to science and technology.

Another important activity of PRAVAH 2007 was the "Art of Techno" an off stage Project Development Competition cum Exhibition.

Both working and non-working models were displayed. Working models includes hardware and embedded models. 24 teams, from the various Engineering Colleges of the State, participated in the contest. The artillery were also displayed in which visitors showed keen interest. Defense personnels demonstrated the working of exhibited artillery. The main idea to conduct this exhibition was to develop interest of students in defense and its peripheral services.

One of the most important chapters of the Pravah 2007 was the "Cultural Evening" and competitions. The event took place in three categories; solo and group singing competitions and semi classical, folk dance competitions and western group and solo dance competitions.

Sports was a big event that continued for two days. It was inaugurated by Shri Nagarmal Moyal.

In addition to all these, a big number of intra college competitions were organised for the SKIT students which includes treasure hunt, Rangoli, Le-Travail, Just-a-Minute, Best out of Waste, Salad Decoration, Hobby Exhibition.

Some activities were also organised for faculty and staff members like musical chair, just a minute, badminton and antakshari.

ANNUAL DAY CELEBRATION

Pravah 2007 was ended with its "Annual Day" celebration on 1st March, 2007. The function witnessed an enormous number of guests. Shri A.K. Pandey, (Additional Chief Secretary) Government of Rajasthan was the Chief Guest, Shri G.S. Sandhu, (Principle Secretary Technical Education) Government of Rajasthan was the presiding guest and Shri Madhukar Gupta (Divisional Commissioner) Jaipur was the Guest of Honour for the occasion.

After the inauguration of Annual Day and the speeches by the guests, cultural programmes were performed by the students which were full of different colours of various Indian folk dances, thrilling and sizzling western songs and dances. Hilarious mimicry and so many other entertaining activities were presented by the students. Prizes were awarded to the students for performing their best in academics and professionals.

1. **Techno Kreats Technical Paper Presentation**

   a) **Science** : Sandeep and Abhishek (winners) Aditi Tiwari (Runner-up)

   b) **Electronics and Communication** : Madan Singh (Winner) Neha Anand and* Neha Chaudhary (Runner-up)

   c) **Management** : Preeti Agarwal & Neha Shrimali (Winners) Abhishek Saini (Runner-up)

2. **On the spot Software Development**

   Prateek Badlani & Mahesh Nahata (Eng.. College

Ajmer) (Winner)

Mohammad Naeem & Sudhakar Paliwal (M.E.C. (Runner-up) Bikaner

3. **Kala Kreats**

a) **Semi Classical Dance** (Group) Radhika and Antima (Winner)

b) **Semi Classical Dance** (Solo) Naney Gupta (Winner) Vibhuti Gupta (Runner-up)

c) **Folk Dance** (Group) Kamaldeep & Group (JECRC) (Winner) Ashima & Group (Runner-up)

d) **Folk Dance** (Solo) Mahak Khandelwal (Winner) Aditi (Runner-up)

e) **Group Song** Anirudh & Group (JECRC) (Winner) Uttam & Group (Runner-up)

f) **Solo Song** Shreyas Shrivastava (Winner) Chritine K. Sunny (Runner-up)

4. **Non Technical Events**

a) **Rangoli** Neha Sharma & Abha Sharma (Winners) Shilpa Mehta & Swati Mehta (Runner up)

b) **Thermocol Carving** Shantanu (Winner) Divya Sharma (Runner up)

c) **On the spot painting** Priya Agarwal (Winner) Reena Singh (Runner-up)

d) **Salad** Ankit Joshi and Nikita Bhargava (Winner) Kunal Singh & Rahul (Runner-up)

5. **Sports**

a) **Basket Ball**, SKIT (Winner)

b) **Volley Ball**, SKIT (Winner)

INAUGURATION OF ISTE CHAPTERS

SKIT ISTE chapter and Student chapter were inaugurated on 9 Feb. 07 by Chief Guest Prof. N.R. Shetty, ISTE President. Dr. V.K. Bhansali, Ex Chairman, ISTE Rajasthan and Haryana Section was the Guest of Honour.

The Chief Guest delibrated the importance of ISTE in the present changing industry scenario.

ISTE students chapter of SKIT commenced its activities by organising "BRAINMINE", a general awareness competition on Jan 22, 2007 "ART OF TECHNO" a state level offstage project development competition under the aegis of Pravah 2007 on 27 and 28 Feb., 2007. Shri Rajiva Swaroop, CMD, Rajasthan Renewable Energy Development Corporation, Jaipur inaugurated it.

A unique event that took place in SKIT, Jaipur on 26th & 27th Feb. 2007 was the 8th Battalion of the Kumaun Regiment gave a glimpse and a peak into the Indian Army to engineering students. This was also organised under the aegis of ISTE student chapter.

ACADEMIC EXCELLENCE AWARDS

Prof. R.S. Nirjar Academic Trophy was given to Kriti Singh (EC) for securing overall first rank in the college among all branches of III B.E. during the session 2005-06.

Prof. Alam Singh Academic Trophy was awarded to Richa Sharma (EC) for securing overall first rank in the college among all branches of II B.E. during the session 2005-06.

PRIDE OF SKIT

Ms Mansi Saxena, Mr. Riju Jacob and Mr. Rochak Saxena, pass out students of Electronics and Communication Engineering ; Mr. Vineet Jain and Mr. Tharesh Sharma, pass out students of electrical Engineering session 2005-06 and Nitin Bhatnagar, pass out student of 2004 were conferred on Pride of SKIT for exhibiting professional excellence. A momento was also given to Ms. Rashmi Nair. The evening ended with a sumptuous dinner for all. Pravah 2007 printed an everlasting mark on the memory of all the SKITians and left them for the next such a fabulous celebration.

SERVING THE HUMANITY : BLOOD DONATION CAMP

With the view of serving the humanity, two blood donation camps were organised for the fifth consecutive year under the leadership of Mr. Yogesh Chandra Sharma, incharge Youth Red Cross Club SKIT, on 16th September 2006 and 13th February 2007, by Youth Red Cross Club SKIT in association with Indian Red Cross Society, Rajasthan Unit and Blood Bank Santokba Duralbhji Memorial, Jaipur. Dr. P.P.S. Mathur, Vice

Chancellor of University of Health Science and Lion Er. Suresh Chandra Sharma were the guests on this occasion. In these around 350 SKITians donated their blood.

FIRST YEAR ADMISSIONS

The intake of BE course is of 420 seats and all were filled in the very first phase of counseling conducted by RPETAP-2006. SKIT stood first among all the self financing colleges of the state in this procedure.

The credit for all these success goes to quality teaching by erudite and committed faculty, to the Principal Prof. S.L. Surana for his able guidance, the Management for providing the best available technological infrastructure and a greater emphasis on the extra curricular activities in the campus.

Advancing a step ahead in the path of progress and to achieve excellence in Techno Managerial environment management studies are offered in the institute. Admissions in the department of management studies for two years MBA degree programme started with an intake of sixty students with good RMAT ranks.

SKIT group has also ventured in the field of pharmacy education by opening of Swami Keshvanand Institute of Pharmacy. Admissions in the course were through RPETEAP-2006 for sixty students. Within a short span of time these departments have gained recognition.

All these things have helped students in achieving academic excellence, right kind of attitude and the required skill set.

SKITians DO US PROUD

The SKITians listed below participated with vigour and enthusiasm in various national and state level technical, cultural and sports events organized by different engineering colleges and won prizes.

1. **VIVACITY 2007 organised by LMNIIT, Jaipur**

   a) **Extempore :** Arpita Sharma (Winner)

   b) **Treasure Hunt :** Mudit Bhargava (Winner)

   c) **COSMODS :** Ashish Surana, Revati Raman Sharma (Winner)

2. **AAYAM 2006 organised by Gyan Vihar Universe, Jaipur**

   a) **English Debate :** Rakesh Jain (Runner Up)

3. **SITE, 2007, organised by Shankara College of Engg. Jaipur**

   a) **English Debate :** Arpita Sharma (Winner)

   b) **Volley Ball :** Surendra Lamba, Nishant Beniwal, Tejpal Mirdha, Abhimanyu Singh Ranawat, Manjeet Sharma, Gautam Chhimpa, Vikas Krishania, Vikas Singh, Vivek Kajla, Harmeet (Winner)

   c) **Basket Ball :** Anuj Jangu, Rahul Chaudhary, Varun Verma, Arjun Jhajharia, Amit Sharma, Kunal Chaudhary, Shomik Banerjee, Kanishk Poonia, Sameed Hashmi, Anirudh Rathore, Ravindra Mittal. (Runner-up)

4. **Renaissance-2007 organised by JECERC, Jaipur**

   (a) Play Abhimanyu Kashyap, Prasoon Godika, Mahak Khandelwal, Deepak Sharma, Ashish Singh, Mukesh Varyani, Ankit Bhargava (Runner-up)

FAREWELL 2007

It was organised by the 3rd year students to bid farewell to the final year students on 30th April 2007.

Various cultural activities were organised by the 3rd year as well as by the final year students. The most intersting event was the selection of Mr. and Miss SKIT-07. 10 boys and 10 girls were nominated according to the criterion set up by organising committee. After two rounds Balbir Singh was selected as Mr. SKIT and Anushree Jain as Miss SKIT by the honourable judges. Mr. Deep and Miss Malika were the judges from Radio city 91.1 FM. Two special prizes were given by Radio city to Mr. Looks, Tejpal Mirdha and Miss Looks, Swati Khanna.

SELECTION IN IIM-A

Ekta Gupta, passed out student of first batch of SKIT, got selected in IIM-Ahmedabad. Congratulations on behalf of entire SKIT family.

SOME NOTEWORTHY ACCOMPLISHMENTS BY OUR FACULTY

DEPARTMENT OF MANAGEMENT STUDIES

Articles Published

April 9, 2007

"Achieving Personal Excellence", an article on personality development by Vikas Shrotriya, Reader, Department of Management Studies, is published in April 2007 issue of MBA Review, a magazine published by ICFAI university.

April 27, 2007

"Strategic Management Accounting", an article on strategic management accounting by Vikas Shrotiya, Reader, Department of Management Studies, is published as cover story in May 2007 issue of "The Accounting World", a monthly accounting digest, published by ICFAI University Press.

Achievement

April, 17, 2007

Vikas Shrotriya, Reader, Department of Management Studies has been nominated to receive an Honorary D.Litt. Degree from University Bristol, U.K. The nomination has been accepted by senior Assistant Registrar, University of Bristol, on the basis of his qualifications, research work and articles.

PGP '1967 Reunion Attended at IIM-A

"WHAT WE BEGAN, OTHERS MANAGED TO TAKE TO GREATER HEIGHTS"

A REUNION OF ANY CLASS, ANYWHERE, IS A SPECIAL EVENT.

Prof. R.S. Mehta attended PGP' 1967 Reunion (Jan 12th to 14th 2007) of the second batch to pass out from IIM, Ahmedabad. The batch mates supported by our former 'Gurus' explored ways in which we could contribute to institutional building i.e. our alma mater as well as society in general.

Meeting Attended

March 23, 2007

Vikas Shrotriya, Reader, Department of Management Studies, participated in first of the series of group discussion for "Running of Short Duration Vocational Training Programme on Retail Marketing", on March 23, 2007, at Krishi Bhawan. The group comprised of delegates from EMDI, RMoL, representatives from the industrial sector and representatives of other educational institutes. The discussion covered various aspects of the course aimed at providing trained personnels to the upcoming retail sector.

Ph.D. AWARDED

- Dr. Yogesh Chandra Sharma, Senior Lecturer, Department of Physics was awarded Ph.D. on May 25, 2007, by the university of Rajasthan. He did his research on, "Compton Profile study of some Elemental Solids and Coompounds" under the supervision of Prof. B.K.Sharma, Dean, Faculty of Science, University of Rajasthan.

- Dr. Veenu Sisodia, Senior lecturer in Physics was awarded Ph.D. on July 8, 2006 by the University of Rajasthan. She did her research on 'Study of swift heavy ion beam induced mixing at metal/Si interfaces' under the supervision of Dr. I.P. Jain, Director centre for non-conventional energy resources.

CONFERENCES ATTENDED

1. 76th Annual Session of National Academy of Sciences, India & Symposium on Science and Technology in the service of society held at IIT Bombay from 6th to 8th October, 2006.

2. International Workshop on the Physics of Mesoscopic and Disordered Materials MESODIS 2006 held at Indian Institute of Technology, Kanpur from 4th to 8th Dec. 2006.

3. 51st DAE Solid Sate Physics Symposium (Dec. 26-30, 2006) held at the Department of Physics & Electronics, Barkatullah University, Bhopal.

4. 2nd National Conference on Condensed Matter and Material Physics at the Department of Physics, University of Rajasthan, Jaipur from February 1-3, 2007.

The following papers were presented :

1. Electron momentum distribution and charge transfer study of arsenic triselenide.

2. Compton profile study of vanadium germanide and

chromium germanide

3. Electronic Structure Study of Arsenic using Compton Spectroscopy.

4. Compton profile study of bonding in A-15 compound V3Ge

Dr. Yogesh Chandra Shrma
Senior Lecturer, Physics

- Dr. Amber Srivastava Senior Lecturer, Deptt. of Mathematics, attended a conference on Discrete Mathematics held at IISC, Bangalore from December, 15 to december 18, 2006.

- Students of MBA (Pt I) attended VCFIN 2006, 3rd National Conference on "Emerging Business Opportunities and Role of Venture Capital", on November 17th, 2006, organized by FICCI, RIICO and RVCF.

RESEARCH PAPERS PRESENTED

- Ms. Preeti S. Kurup, Lecturer Dept. of English attended the 15th world Congress of International Federation of Theater Research (IFTR) 2006 held at University of Hensinki, Finland, from 7-12th August 2006. She won the very first Hensinki Prize for her research paper "Trickster-The Universal Ghost". She also presented the same paper at the Congress.

RESEARCH PAPERS PUBLISHED

- 1. "Two-Dimensional Generalized Weyl Fractional Calculus Pertaining to Two-

Dimensional H-Transforms"
Published in Tamkang Journal of Mathematics, Taiwan, China.
Vol. 37, No. 3, 2006 (Sept.)

2. "A unified approach to fractional calculus pertaining to H-functions"
Published in Soochow Journal of Mathematics, Vol. 33, No. 2, April 2007 Taiwan, China

Dr. Amber Srivastava
Senior Lecturer, Deptt. of Mathematics

- "Electronic structure study of gold by compton spectroscopy."
Publiched in National Academy of Sciences India Proceedings.
Vol. 76 (A) II (2006)

Dr. Yogesh Chandra Sharma
Senior Lecturer, Deptt. of Physics

- A case study, "Relation between Working Capital and Sales of Indian Fertilizer Industry". done by Vikas Shrotriya, Reader, Department of Management Studies, is published in Sept, 2006 issue of Fertilizer Marketing News.
February 15th, 2007

- "Insights into Personal Investment Management", an article on investment management by Vikas Shrotriya, Reader, Department of Management Studies, is published in February 2007 issue of PORTFOIO ORGANIZER, a magazine published by ICFAI University.

WORKSHOPS ATTENDED

- Students of MBA, Neha Shrimali and Sumit Sukhija, participated in 4 Days Workshop on "Construction Project Management", organized by Rajasthan State Estate Development Council, during 9th 12th February, 2007.

- Mr. Rohit Mukherjee (Reader, Deptt. of Mathematics) and Ms. Shweta Rathi (Lecturer, Deptt. of English) attended a multi topic facilitated Soft skill program. It was a 6 days program (Jan 7th - 12th) organised by Infosys at Chandigarh.

- "Soft-skills" are those that are crucial to students ability to work "smarter". As there is critical need to bridge the soft-skills gap, as a 5 days faculty roll out program had also undertaken seriously. Such training will surely help students to be "INDUSTRY-READY".

- Faculty of CS/IT, Mahender Beniwal and Amit Gupta, participated in a 3 days Work shop on "Product Migration", organized by Infosys Technologies Ltd., Chandigarh from 3rd to 5th April, 2007. The objective of this program is to share latest practices and developments in "Product Migration". It dealt with general process of product migration along with the issues related to porting of code between various operating system/platforms. The advanced areas also covered like virtualization and

demonstration of Install Anywhere Software.

SEMINARS ATTENDED

- Mr. Satyendra Kumar Sharma, lecturer in department of management studies attended a seminar on 28.8.2006 on "Competitive in manufacturing in next decade opportunities in Rajasthan" conducted by DMS, MNIT, Jaipur.

- Mr. Manish Kumar, Sr. Lecturer E&C Dept. attended a TEQIP sponsored conference organised MNIT, Jaipur in association with Intel Corporation India Ltd.

- A one day seminar on Enviro health and safety (EHS) and water technology was organized by SWAN ENVIRONMENTA PVT. LTD. at Jaipur Palace, Jaipur on 8th Dec. 2006. Dr. Sangeeta Vyas (Reader, Chem Dept.) attended and participated in the seminar.

- Ms. Shweta Rathi, Lecturer, English Dept., has attended two days seminar on COMPARATIVE LITERATURE at JNV University, Jodhpur on 27th - 28th February 2007.

SYMPOSIUM ATTENDED

1. International Workshop on Hydrogen Energy, IWHE-2006 by Centre for non-conventional Energy resources held at Univ. of Rajasthan from 5th to 8th November, 2006.

2. International Symposium on Surface and Interface by Centre for non-conventional Energy resources held at Univ. of Rajasthan from 9th to 13th November, 2006.

(Dr. Veenu Sisodia)
Head, Dept. of Physics

BOOKS PUBLISHED

- Statistics and Probability Theory

  --Nupur Srivastawa

  Sr. Lecturer, Deptt of Mathematics

  Published by Genius Publications (INDIA), Jaipur.

- Published 'Telecom Fundamentals of Engineering' by Mr. Anoop Singh Poonia, (Reader, ECE). Publishers 'Paragon International Publishers'. 5 Ansari Road, Daryaganj, New Delhi. e-mail : gph2004@yahoo.co.in.

SEWAGE WATER TREATMENT PLANT VISIT

Dr Archana Saxena
(Reader, Chem. Dept.)
and
Dr. Sangeeta Vyas
(Reader, Chem. Dept.)
visited Sewage Treatment
Plant at Delawas, Jaipur on oct 9th, 2006

It is the biggest treatment plant in Rajasthan and it treats 62.5 million litre sewage water per day.

FACULTY DEVELOPMENT PROGRAM IN ASSOCIATION WITH IBM.

The faculty development program (FDP) was conducted at institute from 25th to 27th March, 2007 in association with IBM. This program was regarding IT infrastructure management software "Tivoli". Total 31 faculties participated in this program from

various engineering colleges. The IBM faculty was Mr. Prashant Pokharana from Bombay. IBM has assured that free coupon of Rs. 7500/- would be given to each participants on clearing online certification test conducted at SKIT.

Mr. Anil Chaudhary
HOD, Information Technology Deptt.

THE GREAT MIND CHALLENGE 2007"- (TGMC)

The Great Mind Challenge, a premier national contest was launched and opened to all Engineering and MCA colleges. It is aimed to encourage students who aspire to make key contributions to develop applications on leading edge IBM technologies by enabling them to work on real world projects scenarios, while providing them with an opportunity to improve their software development skills.

In this contest, the registrations were open in 24 states, Over 700 institutions, approx, 2200 students and 3000 faculty members got enlisted making the contest an unparalleled success.

The Great Mind Challenge felicitation ceremony for 2006 has been celebrated on March 27th at Chennai and Mr. Anil Chaudhary has been a part of this ceremony and received the plaque from IBM. In this National Level Software Development contes, it's a matter of immense pleasure that across India, SKIT is one among the top 30 institutions that have been selected as winners. SKIT happens to win a Think Center, a Hige End Configuration Machine.

Career

conquer the heights

POWER PREPARATION

MOTIVATE YOURSELF

One of the greatest virtues of human beings is their ability to think and act accordingly. The emergence of the techno savvy man from a tree swinging ape has really been a long journey. This transition has taken a span of countless centuries and lots of thinking caps have been involved. Inquisitiveness and aspiration to come out with the best have been the pillars for man's quest for development. Self-motivation is the sheer force, which pulled him apart and distinguished him from his primitive ancestors.

Many times, in our life, when we are reviving old memories we get into a phase of nostalgia. We feel that we could have done better than what we had achieved. Be it thinking about that nerve shattering school result, because of which you couldn't get into your favorite stream, or, that single mark, which could have secured you a merit seat in an engineering college. But thinking back won't rewind the tireless worker called time. All we can do is promise ourselves that we will give our very best in the future. But do we really keep up to our mental commitments? I can guess that 90% answers are in the negative. This is because of that creepy careless attitude which is slowly, but surely entering into the mind of teenagers like us. We easily forget the pains of

yesterday to relish the joys of today. This is the only time in our life, when we can control our fate, by controlling our mind. So it is time to pull up our socks and really motivate ourselves so that we can give our best shot in the future. Self-motivation is the need of the hour. Only we can control and restrict ourselves. Its upto us, how we use our mental capabilities to the best of our abilities.

Here are some Funda's for self-motivation. Don't just read them but digest each one of them and apply them and I bet it will make a better YOU.

- The ultimate motivator is defeat. Once you are defeated, you have nowhere to go except the top.

- Then only thing that stops you is yourself.

- There is no guarantee that tomorrow will come. So do it today.

- Intentions don't count, but actions do.

- Don't let who you are, stunt what you want to be.

- Success is the greatest motivator.

- Your goals must be clear, but the guidelines must be flexible.

Include these one liners in your scrapbook or on your favorite poster. You will be sub-consciously tuned to achieve what you want. Also do keep

in mind that nothing can control your destiny but you!

CONFIDENCE

Every day is a new day in our life. There is much to do today. The early morning sun inspires us to start things freshly and put back our past. Only a handful of us make use of this fresh bunch of energy. In various walks of life this affects the way we behave and our confidence level. Confidence is a key to survive in this world. It is the only key tool to win the rat race in every walk of life. Confidence in ones own capabilities combined with sincere efforts helps one to achieve unthinkable heights. But many times we see that this basic element of confidence is missing in us. As a result of lack of confidence we perform well below our caliber. Be it in a public speech, proposing your beloved, vivas in your college or in an interview or say even on the eve before your exams. This can be due to fear of being rejected.

If we look into our hearts and think, we will come to know that fear inside us is going to get us nowhere. The confidence inside us is going to take us to higher places. This is because with confidence we can put our thoughts into words in a better and pleasing way. So we have to get out of that shell where we think whether people will accept us as we are? Instead of living in these unending moments of fear and

thoughtless analysis it is better if we project ourselves with the skills we have with the gloss of confidence. With confidence we can portray the finer points of our personality in such a way that the places where we do lack are never highlighted.

Confidence should glow in us only till the point where our personality is boosted. Beyond this, it leads to over-confidence which is harmful.

Over confidence results in unsatisfied performance levels as the seed of ego grows into a plant in our mind. We then imagine and make big talks just to maintain our ego. So guys don't let the seed of ego to germinate in your mind.

Confidence is all about being cool, calm and composed.

So guys do you have it in you? If you think you don't, boost up yourselves as your mind is your greatest mentor. You are your greatest helper.

5 WAYS TO STAY FOCUSED ON YOUR GOALS

No matter how excited you are about your business, with so many distractions and things that may be going on in your life, you can easily find yourself losing focus on your goals and what you want to accomplish. Below you will find 5 things that will help you stay focused on your goals.

Finish What You Started

You probably have heard the saying, "So many things to do and not enough time to do them." Even though that may be true, you still have to complete them all, especially if these things help you to reach your goals. To make it easier for you, just take a thing you have to do and complete that task until it is done. When it is done, you will feel a sense of accomplishment and it will motivate you to move on to your next task.

Organize To Make Things Easy And Simple

Take a moment to put things in order. If people write to you or send you orders in the mail, make 3 piles. Put the letters that need to be answered right away in the first pile. Letters that can be answered at a later date you can put in the second pile and letters that have orders in them, you can put in the 3rd pile. Doing things like this in other areas of your life will help you keep things in priority and keep you focused on your goals.

Change The Way You Look At Things

If you find yourself at times having a negative attitude, you must realize that the way you look at things can make all the difference when it comes to reaching your goals. Even when obstacles stand in your way, maintaining a positive attitude, not a negative one and knowing that things can and will get better, will help you stay on track in reaching your goals.

Understand Goals Will Take Time To Reach

Everything in life, if it is worth it, will take time. This goes for the goals you set for yourself. When you set goals, you should set 2 types of goals. A short term goal such as 6 months and also a long range goal, such as 3 years. You must realize that you are not going to reach your long term goals in 2 weeks. Whatever your goals may be, only through hard work, determination and keeping yourself focused, this is the way you will eventually reach your goals.

Study And Read Articles On Motivation

Reading articles, books or even listening to cassette tapes on motivation is a must if you want to keep yourself focused on your goals. Many successful people will tell you that even when they wanted to give up and throw in the towel, a paragraph in a book or something a motivational speaker said put them back on the right track and helped them reach their goals. So if you want to stay focused on your goals, take these 5 points and put them into action today.

TIPS FOR BETTER RÉSUMÉ

1. Use Attractive Formatting

Five minutes. That's all you have to grab the reader's attention and market yourself effectively. You can achieve this with attractive formatting.

The key is to have a good balance of white space and text. Your résumé should not look empty, nor should it overwhelm the reader with text. Keep margins of at least one" on all sides (some companies may still keep your résumé "on file" i.e. in

three-ring binders). Make the résumé readable by using a minimum of a 10-point font for text and II-point for headings. Use, at most, three levels of formatting (normal text, bold, and italics) or else it will distract the reader. Remember, although you want to get the reader's attention, do so with communicative titles and descriptions rather than with fancy fonts and graphics.

A badly formatted résumé will look sloppy. If you submit such a document, you might as well forget about the interview.

2. Cover The Basics

The key point here is to not complicate matters for the reader. They should be able to obtain all pertinent information about you without moving from their chair (yes, it sounds ludicrous, but that's how it needs to be). So, make sure that your 'resume' contains the following information.

- **Contact Information** like name, address, phone/fax numbers, and email address.

- **Objective.** A single statement should sum up your goals.

- **Education.** If you've graduated recently and want to highlight it, place education before the experience and skills section and list your course work. List GP as only if they are good. Education should always be listed in reverse chronological order. Assuming that you have an undergraduate degree, do not list your high school education since it is irrelevant.

- **Work Experience.** Again, this must be listed in reverse chronological order, and must include the company title, location, time frame of work there, responsibilities and projects. More on this later.

- **Publications, Patents, and Awards.** List these or anything else that is relevant to your job function in this section. If you have many publications and patents, consider listing them on a separate page and attach it to your resume.

- **Computer Skills.** This section can include hardware, software, programming language, and operating system experience. It's not necessary to include everything, but do make sure you list a few critical items which can be caught by 'resume' tracking software.

- **Other Skills and Activities.** This section can be used to show that you are a well-rounded individual. It can include membership in industry-related societies. Keep it short, general, and avoid controversial hobbies or pastimes.

If you have many years of experience, you can also provide a summary of your skills before the "Experience" and "Education" sections.

SOFT SKILLS

6 soft skills for every hard-nosed professional

Behavioral training experts say there are several soft skills are required in these circumstances.

Some of them include:

i.   Interpersonal skills

ii.   Team spirit

iii.   Social grace

iv.   Business etiquette

v.   Negotiation skills

vi.   Behavioural traits such as attitude, motivation and time management

Do you have these? If your answer is yes, good for you.

But if your answer is no, then you know it is time to approach either a training organisation or a training consultant.

Will formal training enhance your soft skills?

There is a lot of argument in the industry as to whether it is possible to enhance soft skills in a few hours of training, especially when one considers the fact that a person has lived with those traits all his life. To this, the answer is harsh but real -- a professional who wants to do well in his/ her career does not really have a choice.

In the initial years of your career, your technical abilities are important to get good assignments. However, when it comes to growing in an organisation, it is your personality that matters, more so in large organisations where several people with similar technical expertise will compete for a promotion.

Training on soft skills becomes all the more relevant in a country like India where the education system does not delve into personality

development.

"Soft skills training is essential because we do not have it in our academic curriculum. Therefore, corporate houses have to take up the task of grooming employees who are the link between the company and the external world, so that they are able to present themselves better, "says Sumeet Mehta, an equity research analyst with Fortis Securities Ltd.

Be your own trainer!

While organisations are definitely investing in augmenting their staffs people skills, here are some inputs for professionals and students who would like to initiate the process themselves:

i. Be a part of team activities

It could be either as a part of your church choir, or an NGO, or your local youth circle.

Observe your own behaviour in the group and how you relate to others.

ii. Ask family members or close friends to write down your best and worst traits.

Ideally, have at least four to five people do this for you.

Evaluate the common traits all of them have mentioned. Thus, you can be aware of your strengths which help in improving your weaknesses.

iii. How well do you manage your time?

Think!

Can you do more in life? Or is your day too crammed with activities? Effective time management is very essential in the corporate world.

iv. Introspect on how you react to feedback.

In organisations, people skills mostly come into the picture when there is feedback given -- be it for an idea, an executed project or a presentation.

You are judged by the way you respond to feedback.

Do you get defensive?

Do you insist you were right?

Do you meekly accept criticism?

Remember, people tend to be judged and stereotyped according to their responses. You will, too.

v. How good are you at critiquing?

While responding to feedback is one side of the coin, giving feedback is the other side.

Are you aggressive? Pessimistic? Do you believe in constructive criticism? Or prefer to be the yesman?

vi. Live consciously

Any organisation is manned by people, therefore soft skills are all about how you deal with people and present yourself.

Though it may be easier said than done, soft skills can be enhanced simply by being aware of oneself and living consciously.

WATCH OUT BEFORE YOU SPEAK

Communication in any form is used for exchange of information. The links called words make communication work. Without words it's difficult to imagine how we could have come so long in the history of human evolution. Word is not only a four letter thing, but it is something deeper than that.

Whenever a word is uttered it is due to synchronization of lip movement and tongue movement. To get out that word from our mouth, a lot of thinking and analysis has been happening in our sub conscious mind. We don't realize it because all this happens in less than one millionth of a second. Most of the times we don't think over what we have uttered. Word is not only a link, but it initiates response from the listener.

The word, which we have uttered, acts on every part of the listener's body. Like if you share a joke using a group of words, you make the listener to laugh. He may pound his hands and fist and then calm down. The very word which you have uttered has allowed him to flush his emotions out in the form of laughter or smile. If you talk about a tragic incident, the listener may close his eyes for a second and offer his condolences. Words uttered vibrate on the mind of the listener. It acts on his mind. Selection and thought prior to communication is very important.

Sometimes we say things which we shouldn't have or we carelessly utter unwanted words (mind you I am not talking of abuses). These things may affect the other person emotionally and mentally. For us it would have been just a matter of

second to wag our tongue, but for the listener it is going to be the only thing at the back of his mind. By using unwanted words or speaking more than necessary, we not only hurt someone, but we also add a spot of dust to our social image. Your future interaction with the person may be based on that single word. Using proper words while talking is just like selecting the items listed out by your mom from the supermarket. You select the best brand from the specific domain, where your item is found.

So guys watch before you speak because the actions of the listener may be louder than your words!

MANAGE PANEL INTERVIEWS

"When you are facing a panel of interviewers, make your best moves."

Whether you are searching for jobs, looking for career avenues or climbing the corporate ladder, you can't escape team interviews these days. The problem is that such interviews don't have a pattern to them. They come in different forms. You could be facing your prospective team members, or you could be up against the top brass-HR Vice-President, the Section Head, the Operations Chief. You could be sent to a recruitment assessment centre for multi-parametric evaluation (psychological tests for pressure-handling abilities, team-player skills and so on).

Try these ten tips for surviving, and scoring, in a team interview.

Give Variety To Your Answers

- Remember you might be interviewed by different panels. Don't give a stock answer to all of them. They'll be comparing notes.

- Repackage your skills so that they sound different. If you're showcasing project X as your major achievement in your present job before one team, talk about project B before another interview panel.

- A technical team will tune in to technical talk; an HR team would rather hear about your interpersonal skills.

Fine-tune Interpersonal Skills

- Pull out the stops on your group management and group presentation skills.

- Interviewers are people after all. Look for the personality type underscoring each interviewer.

- Then try and connect with each one of them without getting personal. Usually the best way to make contact is to project values that you feel you can share with your interviewers.

Don't Quake In Your Boots

- Interviewers are not ogres. They are looking for excuses to hire you, not spill your guts.

- Don't be obsequious. That conveys low self-esteem.

- If you face your interviewers with fear in your eyes, they won't like what they see. They are NOT sadists.

Prepare For Stress

- You'll be up against a time crunch in a team interview.

- In one-on-ones, the interviewer might be taking notes, allowing you little breathers. No such luck with four people firing questions at you. Use stress control techniques to soothe your nerves. You might even use the extra adrenaline to sharpen your responses.

Showcase The Important Things

- List seven important things that fit the job description of the advertised post. Prepare to present skills that fit such traits.

- It helps to talk to friends familiar with the job description. You can even ask.

Rehearse Well

- Put together three family members or friends with diverse personality traits.

- Recreate the formality of a team interview situation and ask them to fire nonstop questions at you. That will serve as a useful practice session.

- Ask for serious feedback, especially about weak areas in your answers. Questions about qualifications and work experience are usually generic, so what your mock team asks you is bound to be pretty close to the real stuff.

Create A Mental Picture Of Yourself

Boost your self-confidence by

seeing yourself as star performer who's a cut above the rest. See yourself answering with elan the questions you expect. Then replay your answers and ask yourself these questions:

- How interesting were your observations?

- Did most of your responses begin the same way?

- Did you use 'we' often, suggesting team-player attributes?

- Are there traces of humour in your responses?

Ask Good Questions

- Research is integral to a good interview performance. Find out as much about you can about the company concerned. Browse the Net, check company reports, put together news clips.

- Armed with your background brief, ask relevant questions about the company.

- If you think you have a bright idea about any ongoing activity, try this: "Did the company consider this option ..."

Look Beyond The Obvious

- Your interview team has some core queries about you. It's these they want you to address. Try and look beyond the up-front questions to decipher their exact intent. Then respond to fill in what the team is really looking for.

- Flesh out your answers to focus on the team's concerns. If they

ask you about your perception of the company's ESOP policy, they want you to present your expectation from a stock option plan.

- Answer in sync with the general tenor of the interview. If your work involves individual research besides team work, don't go overboard about team-player abilities. Balance your answer. Mention how sometimes individual work is more productive though team work is needed to put into action ideas generated by individual research.

--Courtesy

website : Freshersworld.com

E-mail : info@freshersworld.com

ACHIEVABLE REALITY OR EXPENSIVE FANTASY

Conventional wisdom would have us believe that education is easy to avail for the series and enquiring mind. Ideally it should be a truism. Practically in today's world, it is as removed from reality as Don Quixote's vision of grand windmills.

Firstly, there is the logic defying rush for private tuitions and tutorials which is seen as the sure way to success in the numbers game. However, this paper chase leaves the tutorials richer and the students poorer in turns of their exaggerated hopes remaining unrealised. Thereafter, starts the sad but frantic rush for 'donation' seats. Here, it is buying power and

not comparative capabilities of the intellect that wins.

The rat race starts for our youngsters even before they have finished devoting their time and resources to studying for a degree. Very often we come across students who have no clue why they are studying the course that they are. Usually by default. Either they didn't get into medicine so they are studying computer science or their parents desire was for their wards to study engineering. so they are doing so. Even if they had wanted to study animation arts aptitude is a trivial word and not considered in most cases of course selection.

Perhaps, we should take a long and hard look at the options available. More importantly we should educate ourselves on the career and education options available in India and abroad and guide our youngsters accordingly. It is important to dream. Even more important to work at your dream. So all academic and career decisions should be based upon a accurate information and good counseling.

Let us help our children look beyond their immediate horizons of traditional career options and explore vocations that are fast becoming popular and are relatively unexplored. They can also look at opportunities overseas.

It is not true that all students who go abroad to study are toppers. It is really those committed students who strive to enquire

beyond the realm of hearsay and find out what the achievable reality is.

This kind of determined enquiry leads to doors opening in areas where no door way seemed to exist.

Whether we seek to study within the country or overseas, the vision should be global. In the coming years it is imperative that to sustain economic viability of products and services most employers will globalise their operations. And the opportunities for employment will be global too. It will help immensely if this macroscopic perspective is adopted early, rather than as a knee jerk reaction to a later inevitability. Let our youngsters learn to gear themselves to compete with the best, anywhere. Perhaps only then good education will become a reality.

EIGHT TRAPS OF STUDYING

1. **"I don't know where to Begin"**

   Take control. Make a list of all things you have to do. Break your workload down into manageable chunks. Prioritize schedule you time realistically. Don't skip classes before your exam you may miss a review session. Use that hour in b/w classes to review notes. Begin studying early with an hour or 2 per day, slowly build as exam approach.

2. **"I've got so much to study : And so little time "**

   Preview Survey your syllabus, reading material and notes.

Identify the most important topics emphasized and areas still not understood. Previewing saves time, especially with non fiction reading, by helping you organize and focus in on the main topics. Adapt this method to your own style and study material.

3. **"This stuff is so Dry, I can't even stay awake reading it"**

   Attack! Get actively involved with the text as you read. Ask yourself, "What is important to remember about this section?" Take notes or underline key concepts. Discuss the material with others in your class. Study together.

4. **"I Read it. I understand it. But I just can't get it to sink in"**

   Elaborate. We remember best the things that are most meaningful to us. As you are reading, try to elaborate upon new information with your own examples. Try to integrate what you are studying with what you already know. You will be able to remember new material better if you can link it to something that's already meaningful to you.

5. **"I guess I understand it"**

   Test yourself make up questions about key sections in notes or reading. Keep in mind what the professor has stressed in the course. Examiner the relationships b/w concepts of

sections often, simply by changing sections headings you can generate many effective questions.

6. **"There's Too much to remember"**

   Organize, information is recalled better of it is represented in an organized frame work. That will make retrieval more systematic. There are many techniques that can help you organize new information including :-

   (i) Write chapter outlines or summaries, emphasize relationships b/w sections.

   (ii) Group information into categories or hierarchies, where possible.

7. **"I knew it a minute Ago"**

   Review after reading a section , try to recall the information contained in it. Try answering the questions you made up for that section. If you cannot recall enough, re-read portions you had trouble remembering. The more time you spend studying, the more you tend to time to recall.

8. **"But I like to Study in Bed"**

   Context recall is bitter when study context are similar to test context. The greater the similarity b/w study setting, the greater the likelihood that material studied will be recalled during the test.

   --*Prag Tyagi*
   EE

Reminiscences

nostalgia prevails

MY EXPERIENCES OF COLLEGE LIFE

Unbelievable! it is hard to believe that we are in our last days of our college. The place where we joined in as fresher's from school and now we have turned out to be professionals.
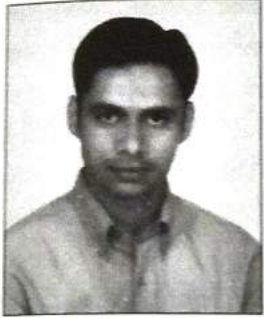
My life in SKIT has been a mix of joys and experiences, interaction with seniors, flow of happiness during PRAVAH, and of course, *Masti Ki Paathshalala* with faculty and friends. I think this college has provided me with a direction in life.

To start with, I wish to mention the role played by the extremely devoted faculty members, who have not distinguished days and nights in order to guide us through some of our toughest times. We have been guided by faculty that is a perfect blend of experience and youth. They are aspiring and also on other hand they are young at heart. The work done by faculty is quite commendable.

Next, the college life features a healthy competition amongst the students. This not only enhanced my academics but also groomed my personality so that I could face different challenges of life with maturity. I can never forget those brain storming classroom and lab sessions that instilled the quality in me to behave as a member of a big cohesive unit -My Class.

Although my experiences of college life can't be summarised in short yet one wants to have ones name mentioned that deserves its place each time we talk of our college. The trainers and staff at TPO have been driving forces, playing a vital role in success of every student. They are working continuously for providing a trigger to the professional careers of every student. I think they deserve a great round of applause from each and every student of SKIT.

It is really very saddening to leave the college but we have found memories of SKIT that we will cherish for long.

From all the passing out batch 2007, I only have this to say to my juniors: "The fastest way to make your dreams come true is to wake up!!"

--Vinarma Parasher
VIII Sem. C.S. (2007 Batch)

YEARS OF GROOMING ...

It is really very enthralling to write about my college with many sweet memories. I can never forget SKIT family that groomed my personality and supported my high intellectual ambitions.

I always find that the faculty and staff is the backbone of my college. All rules and regulations are made to maintain the discipline and we all are well aware that it is only the discipline which helps us in grooming our overall personality.

The four years in college will always remain in depth of my heart and soul. During these years, I learned how to be punctual, regular, sincere and hardworking. It also gave me supportive and caring seniors, dearest of juniors and above all, blessings of my teachers.

I feel proud to be a witness of the gradual growth of SKIT. I wish my college will groom the perfect future engineers.

At last I want to say that the hardest challenge is to be yourself in a world where everyone is trying to make you a somebody else.

--Vishnu Dev Bhardwaj
B.E. VIII Sem ME (2007 Batch)

CLASS OF 2007 : A REFLECTION

As I sit here reflecting upon the last four years of my life, my heart is filled

with every known emotion to the mankind.

These years have been very vital in shaping who we are and who we will be throughout our mortal stay on this planet. Each day has been eventful, each moment priceless and every experience unique and instrumental in what I call "The making of Gladiator".

Year One was all fun : there were new friends to make, engineering graphics sheets to be "topo"-ed, books to be hit when internals were knocking on the door, seniors with whom had great fun, intro experiences, sleepless nights to be spent on the hostel terrace; in all : F U N

Year Two : We were the "seniors" then. Had lots of fun taking freshers out at a time when it was least suspected the pride of being assigned to the branch of our choice and of course had to deal with the sem. exams for the first time. The University tests its bidding engineers by exposing them to the elements, be it December or be it May. The year ended with everyone leaving for practical training : a hot topic for discussion at the end semesters.

Year Three : A very good year for getting all your 'fundas" before the beginning of campus placements. Uphill tasks such as Micro Process and DSP had to be done before we could foray into the last leg of our college life.

Then it poured placement drives towards the end of 6th Semester.

Some were enough lucky others did not; but we sure had a blast of a time.

Year Four : the Final Year, the last but not the least important year of our college life. People were mostly chilled out, half the junta knew where they were placed and the other half was also in the process of knowing where they would be.

As I write this, the year is not yet over

--Mehul Jain

VIII Sem. CS (2007 Batch)

EXPERIENCES OF COLLEGE LIFE

At times, I wonder what would my life be after SKIT. The 8.00a.m. to 2.30p.m. working hours would probably transform to 8.00a.m. to 8.00p.m. There might not be any alternate escaping route. The food at the McDs, the Chabras, the Tadkas and the likes won't taste that good without friends and all their childlike ideas and jokes. Riding on the roads would become so lonely without the bunch of Schumis and their modified machines and spread would never set the adrenaline pumping. There are going to be seniors, but they won't sit shoulder to shoulder in the parking discussing life and

solving my problems. There will be juniors but not as talented. Sporty and lively as I had here. There would be an air cooled cafeteria but it would be without the characteristic Samosa and Kachouri of SKIT canteen and with no one asking for a bite or a treat. There are going to be events and functions but none would trust me with the responsiblity and authority which I enjoyed here. There won't be any inter intra branch cricket matches where I would wait for the college gates to open. There would be reports to be made but none to copy and paste from. There won't be any mass bunks and proxies nor would there be credits for good number of 'P's ahead of my name.

Above all, there were many teachers who always gave in their best for our progress related themselves to our problems and maintained that affable environment in and outside the classrooms.

I'll be left without the zoo batchmates who were a parts of my life for four years and with everyone I had some great cherished moments.

Lastly I would like to thank all my teachers, batchmates and juniors before I bid adieu to this institute.

Remember me as I shall remember you always because the red circle will complete one day.

All the best.

--Rohit Satyam Pareek
VIII Sem. EC (2007 Batch)

Muses' Arcadia

springs of the mount Helicon

THESE MOONLIGHTS, THOSE DUSTY DAYS

You never ever know the reason for your happiness and
cause for your sadness.

Sometimes for the same reason you smile and the other
day you cry.

So easily your biggest assets in life turn into your
deadly enemies.

Happiness and sadness depends upon the person who
stands at the saturation point.

between the two little twist in relations, things can go
either way.

Your priorities keep on changing with each day you live
the person who survives utmost in your list is the one
you want for life.

Well, things don't go smoothly always very rarely you
get him/her and most of the time you loose.

Now, this is what we call cruelties of life.
It's a hard fought war you lose, you die, those who dare
are very rare.

so easily your moonlights can turn into dusty days of
summer.

our golden past does not always guarantee a bright
future ahead.

Once you lose you grip over relations, its very hard to
repair them.

--Poonam Rijwani
Lecturer, CS/I.T. Deptt.

OH! WHY DID I SAY THAT.......??????

A lot of things that I have said,
For which I have felt regret,
I've hurt people for no reason at all,
I took out anger on big and small.
My words were like arrows piercing their hearts,
Hitting them hard, tearing them apart,
My anger was out of control.
Everyone's happiness it stole,
But truthfully, I didn't mean to hurt,
The words just came out,
My anger caused me to scream and shout,
People thought it was a spoilt brat.

Now I think, "Oh! Why did I say that?"
So take my advice, think before you speak
Shouting only makes others weep,
Don't make fun of people because they are thin and fat.
You will only end up saying
"Oh! Why did I say that?"

--Sanchit Grover
I BE (IT)

TRUE FEELINGS

Oh, the comfort the inexpressible
comfort of feeling safe with a person,
having neither to weigh thoughts, nor
measure words, but pouring them all out,
just as they are, chaff and grain together;
knowing that a faithful hand will take and
sift them keep what is worth keeping
and with the breath of kindness blow
the rest away.

--Shweta Rathi
HOD, Deptt. of English

THE JOURNEY INWARDS

Blinded by the superficial world, I strode on ...
Reliving the bygone days, I rode on ....

A tumult of emotions surged inside me,
cherishing the memory of past days, so carefree...

Lost in the sands of time,
I thought for what purpose,
to the world, was I brought ...?

My entire being, immersed in fear and in sin
had shattered my worldly view and the soul within ...

Then, at the end of the tunnel, I saw a light
The light of the Lord... an overwhelming sight.

In a flash, I realised .. it was the inward journey that
mattered.
And I started picking up the pieces of my life, scattered..

and then began a journey of struggle and of strife.

The journey of joy, the journey called life ...

Engulfed in a world of harmony, I climbed uphill ...
And when I reached the top, there appeared another
peak to capture still...

Exploring, seeking .. today I stand,
reassured at each step, by god's guiding hand...

Swept by feelings.. I stride ahead
On the untrodden path, I dare to tread

Let there be light...the light of dawn ...
Let this inner journey go on ... and on ...

--*Shrishti Banerjee*
IV Sem (IT)

MY OWN LITTLE SELF

Who is she who follows me silently in the dark!
Who is she who leaves behind me a mark
She adds her soft voice to every word I utter
She makes the thoughts in my mind better
She begins and encloses her self with my name.
She accompanies me in all my joys and pain
I confess to her and make harmony
I find her sometimes serious and sometimes funny
Who is she
May be she is my own little self
Who will accompany me throughout my life and till my
death

--*Poonam Rijwani*
Lecturer, C.S. / I.t. Deptt.

WE ARE THE WORLD

With the ongoing trends and styles we are evading our
responsibility to educate in values. This is my poetic
contribution to the future of the nation the children to
let them face the world with infectious enthusiasm.

There comes a time when we heed a certain call,
When the world must come together as one.

There are people dying,
And it's time to lend a hand to life,
The greatest gift of all.

We can't go on pretending day by day that someone,
Somewhere, will soon gonna a change.
We are all a part of God's great family
and that you know,
Love is all we need.

We are the world. We are the children.
We are the ones who make a brighter day.
So let's start giving.
There's a choice we're making.
We are saving our own lives.
It's true we'll make a better day, just you and me.

Send them your heart.
So they will know that someone cares,
And their lives will be stronger and free.
As God has shown us by turning stone to bread.
So, we all must lend a helping hand.

When you're down and out there seems no hope at all.
But if you just believe, there's no way we can fall.
Let us realize that a change can only come
When we stand together as one.

--*Sanchit Grover*
I BE (IT)

WHY NOT YOU ?

Today, many will awaken with a fresh sense of
inspiration.
Why not you?
Today, many will open their eyes to the beauty that
surrounds them.
Why not you?
Today, many will choose to leave the ghost of yesterday
behind and seize the immeasurable power of today.
Why not you?
Today, many will break through the barriers of the past
by looking at the blessings of the present.
Why not you?

Today, for many the burden of self doubt and insecurity will be lifted by security and confidence of empowerment.

Why not you?

Today, many will rise above their believed limitations and make contact with their powerful innate strength.

Why not you?

Today, many will choose to live in such a manner that they will be a positive role model for their children.

Why not you?

Today, many will choose to free themselves from the personal imprisonment of their bad habits.

Why not you?

Today, many will choose to live free of conditions and rules governing their own happiness.

Why not you?

Today, many will find abundance in simplicity.

Why not you?

Today, many will be confronted by difficult moral choices and they will choose to do what is right instead of what is beneficial.

Why not you?

Today, many will no longer decide to sit back with a victim mentality, but to take charge of their lives and make positive changes.

Why not you?

Today, many will take the action necessary to make a difference.

Why not you?

Today, many will make the commitment to be a better mother, father, son, daughter, student, teacher, worker, boss, brother, sister & so much more.

Why not you?

Today is a new day!

Many will seize this day.

Many will live it to the fullest.

Why not you?

--*Meenakshi Jain*
Lecturer, E.E.

OPTIMISM

Rough were the days,

Hazardous were the ways.

Wild were the tides,

No rules would it abide.

Fears prevail on the deck.

For a single wave could cause a wreck

The winds were strong, their velocities high,

And every moment a thunder in the sky.

All was dull and my sprit was low,

In front of destiny I thought I'd bow.

In midst of such crisis I found something new,

That before the dawn, there is often little dew.

Hatred agony and sarcasm

Can all be overpowered by optimism?

--*Harsh Gupta*
I B.E.

LEADER AND BOSS

The boss drives the people,

The leader coaches them.

The boss depends on authority,

The leader depends on goodwill.

The boss says "I,

The leader says "we"

The boss fixes the blame for the break down.

The leader fixes the breakdown.

The boss knows how to deal with the problem,

The leader shows how.

The boss says "go",

The leader says "let's go".

--*Dijo George John*
I B.E.

LIFE

Life itself is a question,

where for answering we need caution : A lot of determination.

Perspiration and concentration

Because it may be heading for a bad mutation

Question of life has an answer

Which cannot be written on paper. The only solution.

Write and face all the examination

--*Radheshyam Kumar Gupta*
I B.E.

GREEN COMPUTING - NEED, ROLE OF INDIVIDUAL AND CORPORATE

"According to Gartner Group, 80 percent of the world's data centers are constrained by heat, space, and power requirements."

In recent Toast Master's meeting, one of the speaker wished the audience that in coming years you should drive Mercedes (luxury car) with all the computing luxuries, and further same had been extended by another honorable speaker but in a very different way ofcourse, you all have these kind of facilities but these objects should not be misutilised by raising the issue of Global Warming & Pollution. In this article I am trying to extend the same and mapping with **"Green Computing - Need, role of Individual, Corporate..."** and how sustainable computing can boost your bottom line while simultaneously doing a favor for the planet.

What are the realities of today's data center: In addition to the demand on processing capability to satisfy the growth of the business, there is enormous demand on power consumption and space requirements for computing platforms. Data center configurations are no longer one-dimensional meaning that factors other than performance or affordability must be considered. The equation is much more complicated - now companies must worry about their envelope of power consumption as well as the demand of physical space. These factors all work together to form a multidimensional equation.

What green computing means: Green computing is a mindset. Today's modern network economics have more and more businesses requiring high computing capability whether it be for searches, Web services, e-commerce, traffic control, or supply chain management. The bottom line is that they all require computing with significant capacity.

Until now, many have approached the problem by pushing the physical technology of the CPU frequency - namely, the number of cycles that a piece of silicon can do. But you quickly run into the law of physics that says that when you force the transistors to switch as quickly as possible, there is a corresponding amount of power consumption and the heat generated by the transistors grows proportionally.

Considering that networking has a quadratic effect, the interaction grows geometrically rather than linearly. The industry has reached a point where it has driven power consumption of these increments to a point that it deviates from what the customer can utilize.

"Green computing is not about going out and designing biodegradable packaging for products."

"So green computing is a mind set that asks how we can satisfy the growing demand for network computing wit/lOut putting such pressure on the environment".

There is an alternative way to design a processor and a system such that we don't increase demands on the environment, but still provide an increased amount of processing capability to customers to satisfy their business needs. Green computing is not about going out and designing biodegradable packaging for products.

What responsibility do corporations have to promote and practice sustainable computing: A lot to do! I believe. If IT equipment vendors don't challenge the technology to solve the problems created by technology, then it is irresponsible both to society and the customer.

In terms of responsibility on the customer side, it's the same as it is for individuals in a global environment. Don't consume more power than is necessary and don't litter. Push your suppliers to develop technologies in this direction. Just as we are all encouraged to use recycled paper products.

To what extent does energy efficiency provide a competitive advantage? Is it more than having a cheaper power bill: Yes, the advantage is more than a lower power bill, though energy costs are a very important issue that all CIOs need to worry about. If you acquire a computing facility with capability equivalent to what you have today that consumes less power, you get an immediate payback in savings.

Many of the world's data centers have reached their limit in terms of space, whether it is building space or even space within a city. If people don't start adopting these new designs, they will be forced to

either limit their computing capability, thereby failing to satisfy their business needs, or they will start taking more than their share of the resources in their community. I've heard of companies turning on their huge x86 computing grids and immediately generating such a power spike that the utility company calls to find out what happened.

Even if an institution thinks it can afford to buy more machines and pay higher energy bills, they are still consuming more of the resources from the community and are inadvertently driving up their own product cost, which makes everyone suffer.

"If people don't start adopting these new designs, they will be forced to either limit their computing capability, thereby failing to satisfy their business needs, or they will start taking more than their share of the resources in their community. "

The bottom line is that going green must be beneficial for a company's business. But green does not mean that you have to sacrifice.

How specifically, is the UltraSPARC T1 processor more energy-efficient: Let me take an example of redesigning of one of the processor from sun micro system's UltraSPARC T1 where they had to abandon the conventional circuitry that has diminishing performance contributions and simplify the design to focus on addressing the throughput challenge. Conventional processor design was developed nearly 30 years ago, and yet along with advancements,

including higher and higher frequencies, many of the architectural mechanisms in the processors are no longer offering a performance advantage.

With the Ultra SPARC T1 architecture, they identified the unnecessary mechanisms and either eliminated or simplified them. They implemented the processing core on the smallest amount of space on the silicon die which allowed them to accommodate more cores on the same die which in turn allowed to aggregate computing power. All of this is done without pushing the CPU frequency itself (which has a direct effect of increasing the chip's power consumption). Instead of asking one single engine to execute 9.6 billion cycles per second, they have eight engines executing 1.2 billion cycles per second. Together they still accomplish 9.6 billion cycles of work, but consume much less power than the former single engine running eight times faster.

Then, they incorporated additional components in the processor chip like memory controller and I/O to provide significant performance enhancements and allow for further consolidation of components on the motherboard so that you can have fewer chips on the board. This drives energy savings.

What actions can businesses take to consume less in terms of energy, hardware and power, without affecting the bottom line: When you buy a new washing machine or refrigerator these days, you probably pay attention to the Environmental Protection Agency (EPA) rating that is posted on the appliance. Energy efficiency is a

goal - none of us are interested in buying products that consume the power their older versions did.

"We have a lead of about two to three years for this technology by using LCD based machines in of the computer lab."

When people acquire new computing equipment, they should take into consideration the products' **SWaP** rating if they want to be environmentally responsible. **SWaP** stands for Space, Wattage, and Performance and there is a simple equation to calculate an individual index, depending on the application. Computing equipment with the highest, most efficient **SWaP** ratings are the most environmentally responsible.

What will sustainable computing look like 10 years from now: This is difficult to answer because of the multiplicative effect of network computing. When more people join the network, the interaction level grows exponentially. I believe (specially in Indian Context) that we are still at the beginning of the network computing age, so we can only expect that human demand on computing capability is going to continue to grow. This, coupled with the fact that energy costs are soaring, is going to make it mandatory for customers to pay attention to power and space issues as they procure more computing power.

We all should expect the whole industry would now march in this direction. What remains to be seen is whether or not we can innovate fast enough to keep pace with all of the demands that are sure to arise. If we fail to keep pace, then the

network economics will be confined.

About Anil Chaudhary :

Anil Chaudhary, SUN Certified Java2 Enterprise Edition Architect (J2EE) Architect, brings over 10 years of information technology know-how, engineering vision, and strong business management expertise to Information Technology Society. As Reader, HOD (IT) of SKIT beside academic responsible for driving SKIT's Throughput Computing and Throughput Networking initiatives.

VIRTUALIZATION

Introduction : Virtualization basically allows the multiple virtual machines to run on the same physical host machines .The virtual machines can have different OS, provided it is supported by Vmware .Every virtual machine has its own set of resources like RAM, CPU etc., and these resources are allocated to every virtual machine, from a single pool.

Each virtual machine is nothing more than the set of files saved on the host machine. So, you can easily move those files from one physical machine to another, thereby enabling virtual machine to run on some other physical machine.

Why Virtualization :

- Virtual machines can be used to run multiple operating systems simultaneously

- Virtual machines can provide the illusion of hardware, or hardware configuration that you do not have (such as SCSI devices, multiple network cards, multiple processors,....).

- Virtual machines are great tools

for research and academic experiments. Since they provide isolation; they are safer to work with. They encapsulate the entire state of a running system : you can save the state, examine it, modify it, reload it, and so on. The state also provides an abstraction of the workload being run.

- Virtual machines can be used to crate arbitrary test scenarios, and can lead to some very imaginative, effective quality assurance.

- Virtual machines can isolate what they run, so they provide fault and error containment. You can inject faults proactively into system to study its subsequent behaviour.

- Virtualization is fun.

Advantages of Virtualization

- Multiple virtual machines can be run on the same physical machine, thereby leading to efficient usage of available resources.

- Each virtual machine can have different OS.

- The virtual machines can be easily moves from one physical machine to another.

- The virtual machines can be easily shared with other people / team members simply be sharing the set of files. They can copy of them to their own machine and start using a fresh copy of the same.

- Now with VMware 5, You can even create snapshots within a single virtual machine, which means that state of the machine at different times can be saved

and you can revert back to the saved states later.

--Amit Gupta
Lecturer, CS/IT

PORTING

What is porting?

- A software product needs to be ported to a new operating system

- A software product needs to be ported to another language.

- The back -end database needs to be ported from one flavor to another.

- A software product may need to be ported on different versions of the same operating system or different versions of the same programming language.

Why Porting?

- End customers of a product want it on a different platform

- Market forecast suggests that porting to a newer platform may result in more business

- The current platform support for the product may get deprecated in the future, hence it is necessity.

Activities in Porting- Requirement Analysis

- Understand the software product

- Identify the operating system patch levels for the product on target platform.

- Go through the available case studies for the relevant port to arrive at a proper estimation.

Activities in Porting- Design

- Usage of porting tools to help identify the porting work.

- Decide on the approach of porting- Iterative compilation or porting Analysis.

Activities in Porting- Build Phase

- This is actual phase where porting is done using one of the approaches suggested during design.

- Involves activities like porting of code, make files (in case of Unix platforms), linking with the appropriate third party libraries etc.

- Compile time errors are easy to fix. Runtime errors are usually difficult to resolve. Runtime errors will be detected during unit testing.

- This phase may also involve other activities like deploying the source control software on the target platform also.

Activities in Porting-Testing Phase

- Full functional and integration testing needs to be done on the target platform.

- Regression testing needs to be done on the currently supported platforms to verify that the existing functionality has not broken.

- System testing and performance testing needs to be done on target platform to determine if the performance criteria are being met on the target platform also.

Activities in Porting- Installation and Packaging

- Platform specific scripts used during installation need to be ported.

- The kits need to be created for the target platform.

Activities in Porting-Documentation

- The product manuals need to be updated to indicate the platform support.

- Any functionality that does not work on the target platform or works with some modifications have to be explicitly mentioned in the manuals.

- The installation and setup of the product on the target platform needs to be documented.

--Mahender Kumar Beniwal

Lecturer, (CS/IT)

VIRTUAL KEY BOARD

Definition : A virtual keyboard is actually a key-in device, roughly a size of a fountain pen, which uses highly advanced laser technology, to project a full sized keyboard on to a flat surface. Since the invention of computers they had undergone rapid miniaturization. Disks and components grew smaller in size, but only component remained same for decades -its keyboard. Since miniaturization of a traditional keyboard is very difficult we go for virtual keyboard. Here, a camera tracks the finger movements of the typist to get the correct keystroke. A virtual keyboard is a keyboard that a user operates by typing on or within a wireless or optical - detectable surface or area rather than by depressing physical keys.

Since their invention, computers have undergone rapid miniaturization from being a 'space saver' to 'as tiny as your palm'. Disks and components grew smaller in size, but one component still remained the same for decades

- it's the keyboard. Miniaturization of keyboard had proved nightmare for users. Users of PDAs and smart phones are annoyed by the tiny size of the keys. The new innovation Virtual Keyboard uses advanced technologies to project a full-sized computing key-board to any surface. This device has become the solution for mobile computer users who prefer to do touch-typing than cramping over tiny keys. Typing information into mobile devices usually feels about as natural as a linebacker riding a Big Wheel. Virtual Keyboard is a way to eliminate finger cramping. All that's needed to use the keyboard is a flat surface. Using laser technology, a bright red image of a keyboard is projected from a device such as a handheld. Detection technology based on optical recognition allows users to tap the images of the keys so the virtual keyboard behaves like a real one. It's designed to support any typing speed.

Keyboard : The part of the computer (also that of PDA's, smart phones etc.) that we come into most contact with is probably the piece that we think about the least. But the keyboard is an amazing piece of technology. For instance, did you know that the keyboard on a typical computer system is actually a computer itself?

Virtual Keyboard : A virtual keyboard is a keyboard that a user operates by typing (moving fingers) on or within a wireless or optical-detectable surface or area rather than by depressing physical keys. In one technology, the keyboard is projected optically on a flat surface and, as the user touches the image of a key, the optical device detects

the stroke and sends it to the computer. In another technology, the keyboard is projected on an area and selected keys are transmitted as wireless signals using the short-range Bluetooth technology. With either approach, a virtual keyboard makes it possible for the user of a very small smart phone or a wearable computer to have full keyboard capability.

Theoretically, with either approach, the keyboard can be in space and the user can type by moving fingers through the air! The regular QWERTY keyboard layout is provided. All that's needed to use the keyboard is a flat surface. Using laser technology, a bright red image of a keyboard is projected from a device such as a handheld. Detection technology based on optical recognition allows users to tap the images of the keys so the virtual keyboard behaves like a real one. It's designed to support any typing speed. Several products have been developed that use virtual keyboard to mean a keyboard that has been put on a display screen as an image map. In some cases, the keyboard can be customized. Depending on the product, the user (who may be someone unable to use a regular keyboard) can use a touch screen or a mouse to select the keys.

Advantages of Virtual Keyboard

- Portability
- Accuracy
- Speed of text entry
- Lack of need for flat or large typing surface
- Ability to minimize the risk for repetitive strain injuries

- Flexibility
- Keyboard layouts can be changed by software
- Alternative keyboard layouts.

--Shilpi Gupta

Senior Lecturer, Dept. of CS/IT

FACE RECOGNITION

Definition : Humans are very good at recognizing faces and computers complex patterns. Even a passage of time doesn't affect this capability and therefore it would help become as robust as humans in face recognition. Machine recognition of human faces from still or video images has attracted a great deal of attention in the psychology, image processing, pattern recognition, neural science, computer security. and computer vision communities. Face recognition is probably one of the most non-intrusive and user-friendly biometric authentication methods currently available; a screen-saver equipped with face recognition technology can automatically unlock the screen whenever the authorized user approaches the computer.

Face is an important part of who we are and how people identify us. It is arguably a person's most unique physical characteristic. While humans have had the innate ability to recognize and distinguish different faces for millions of years, computers are just now catching up.

Visionics, a company based in New Jersey, is one of many developers of facial recognition technology. The twist to its particular software, Facelt, is that it

can pick someone's face out of a crowd, extract that face from the scene and compare it to a rest of the scene and compare it to a database full of stored images. In order for this software to work, it has to know what a basic face looks like. Facial recognition software is designed to pinpoint a face and measure its features. Each face has certain distinguishable landmarks, which make up the different facial features. These landmarks are referred to as nodal points. There are about 80 nodal points on a human face. Here are a few of the nodal points that are measured by the software:

Distance between eyes

- Width of nose
- Depth of eye sockets
- Cheekbones
- Jaw line
- Chin

These nodal points are measured to create a numerical code, a string of numbers that represents the face in a database. This code is called a face print. Only 14 to 22 nodal points are needed for the Facelt software to complete the recognition process.

Software : Facial recognition software falls into a larger group of technologies known as bio-metrics. Bio-metrics uses biological information to verify identity. The basic idea behind bio-metrics is that our bodies contain unique properties that can be used to distinguish us from others. Besides facial recognition. biometric authentication methods also include:

- Fingerprint scan
- Retina scan

• Voice identification

Facial recognition methods generally involve a series of steps that serve to capture, analyze and compare a face to a database of stored images. The basic processes used by the FaceIt system to capture and compare images are:

1. **Detection** - When the system is attached to a video surveillance system, the recognition software searches the field of view of a video camera for faces. If there is a face in the view, it is detected within a fraction of a second. A multi-scale algorithm is used to search for faces in low resolution. The system switches to a high-resolution search only after a head-like shape is detected.

2. **Alignment** - Once a face is detected, the system determines the head's position, size and pose. A face needs to be turned at least 35 degrees toward the camera for the system to register it.

3. **Normalization** -The image of the head is scaled and rotated so that it can be registered and mapped into an appropriate size and pose. Normalization is performed regardless of the head's location and distance from the camera. Light does not impact the normalization process.

4. **Representation** - The system translates the facial data into a unique code. This coding process allows for easier comparison of the newly acquired facial data to stored facial data.

5. **Matching** - The newly acquired facial data is compared to the stored data and (ideally) linked to at least one stored facial representation.

--Deepa Sharma
Lecturer, CS/IT

BIOMIMETICS

Biomimetics refers to all of the substances, equipment, mechanisms and systems that people produce in order to imitate the system present in nature. The scientific community feels a great need for the use of such equipment, in the field of nanotechnology, robot technology, artificial intelligence and medicine.

Biomimetics was first put forward by Janine M. Benyus. The theme of biomimetics is that we have much to learn from the natural world. Researchers of biomimetics have a reverence for natural designs and the inspiration to use them to solve human problems. By using natural systems as models, we can create technologies that are more sustainable than those in use today. Engineers and scientists are increasingly turning towards nature for design inspiration. The field of biomimetics, the application of methods and systems found in nature to engineering and technology has a number of innovations far superior to what the human mind alone could have devised.

Because, the nature, through billions of years of trials and errors, has produced effective solutions to innumerable complex real world problems.

Generally there are three areas in biology after which technological solutions can be modeled :

1. Replicating natural manufacturing methods as in the production of chemical compounds by plants and animals.

2. Mimicking mechanisms found in nature.

3. Imitating organizational principles from social behaviour of organisms like bees, ants, and micro organisms.

To capitalize on the wealth of designs and processes found in nature, Dr. Julian Vincent, the director of the centre of biomimetic and natural technologies at the University of Bath in England, has advised a "Biological Patents" database that will enable engineers to directly tap into nature's workings.

"This database will let anyone search through a wide range of biological mechanisms and properties to find natural solutions to technological problems."

"If you want to fly, you don't copy a bird, but you do copy the use of wings and aerofoils, "say Dr. Vincent.

There is a great hope that biomimetics will help mankind developed technologies that both reduce our impact on the environment around us and improve our quality of life. There are some areas where biomimetics is in action :

1. The Defense Advanced Research Projects Agency (DARPA), a research and

development organisation for the U.S. Department of Defense (DoD), and NASA are studying the navigational systems and locomotive strategies of insects to design the next generation of autonomous robots and vehicles.

2. A research team at Bell labs has found that tropical deep-sea sponge, Euplectella or Venus's Flower Basket, builds strong structures from extremely fragile materials, according to a press release from Lucent Technologies. This discovery need unique insights in the production of commercial fiber optic strands.

3. Daimler Chrysler is developing a new high fuel efficiency concept vehicle based on the body shape of a box fish, a common cube shaped fish found in tropical marine habitats. The bionic car will offer 20% lower fuel consumption and up to 80% lower nitrogen oxide emissions according to a release from Daimler Chrysler.

4. Countless plants generate compounds that fight off infection from fungi, insects and other pests.

In near future, consumers should expect to see increased use of biomimetics to improve efficiency of human designed products and systems through the application of pragmatic natural solutions developed by evolution.

Nature provides the best examples of design because natural designs have stood the test of evolution and time and are refined

to the point of ultimate minimization to achieve the highest performance.

--Vinita Pandey
Lecturer, ECE.
References : Electronics Maker
www.ieee.org

COMPUTERISING THE BODY

The concept of utilising the human body as a transmission medium has been around for some time, however, putting it in to practice has faced challenges such as low reliability resulting from electrical conductivity characteristics that differ from person to person and vary by different parts of the body and sweating stages of an individual. Matushita Electric works, Japan, has succeeded in using the human body as a conduit to conduct near field data communication. This communication system requires no wiring or radio transmission but an instant touch with the fingertip to complete data transmission. It transfers data over a weak electric current fed in to the human body. The user can transmit data stored in a wrist band communication device by touching the electrodes of the targeted communication terminal. Another downsize device employing a dedicated chip allows not only man machine but also inter human data transfer.

The company resolved many challenges by incorporating a mechanism that detects and feeds back electrical conductivity properties of the human body which differs in individuals and developed the basic technique of human body communication in 2001. The transmission rate at that

time was as low as 1200 bps, which required further R&D activities for its practical application. This has been improved to 3700 bps along with enhanced noise tolerance.

IBM, USA is working on the concept of autonomic computing of the human body. The human body's self regulating nervous system presents an excellent model for creating the next generation of computers. Autonomic computing is a comprehensive and holistic approach that should result in a huge improvement in the cost, availability and experience in terms of how people relate to information technology. It's motivated by an analogy to the human body that most of the things in our own bodies are taken care of automatically for us.

Most of the functions that our body performs time to time are taken as guaranteed by us due to reliable and automatic electronics of our body. The autonomic functions of our body save us a lot of grief and, ideally, allow us time to pursue higher activities; our heart beats by itself, we need not remind ourselves to sweat when it's hot, our heart rate catches-up when we hurry up. our eyes eventually adjusts themselves to morning, our antibodies work all day long to fight bacteria without our giving a thought to them, and, except for those of us who look at computer screens the entire day, we don't have to constantly remind ourselves to moisten our eyes by blinking. If we pause for a moment and imagine they didn't do all this themselves, we would have pretty much the current state of computing. We would like our

systems to regulate themselves in the same way. This kind of technology has actually been used in component form for quite a number of years. Existing examples are load balancing and error checking and intrusion detection. Efforts are on for a complete system to operate automatically. So rather then having to tell systems what to do explicitly in the face of a certain situation, like a failure or increase in load, we will just tell these systems what we're trying to accomplish from the ends of fingers to the tips of toes, the human body is a moving, throbbing collection of tubes and tunnels, filled with salty water and all capable of transmitting information the lifeblood of 21st century computer software giant microsoft has been granted exclusive rights to this ability of the body to act as a computer network transmitting power and data. The company envisages using the human skin's conductive properties to link a host of electronic devices around the body, from pagers and personal data assistants (PDA's) to mobile phones and microphones. The technology could usher in a new class of portable and wearable electronic gizmos such as earrings that can deliver sounds sent from a phone worn on the belt, and special spectacles with screens that flash up accompanying images and video footage. Linking electronic devices raises other possibilities. Gadget lovers could use a single keypad to operate their phone, PDA and MP3 music players, or combine the output of their watch, pager and radio into a single speaker. At its most far reaching impact, the

technology could combine with chips and sensors fitted around our bodies and clothes to sense and react to the changing circumstances of our everyday lives. The technology also raises the prospect of an array of sensors fitted around the body to monitor health. Earrings could read pulse rate and a bracelet could monitor the composition of our sweat. Together with other medical information, this would be sent via the skin to a central chip and instantly transmitted to the computer. A number of different devices could be powered from a single power source strapped to the skin. The body could generate the power needed to run its various attached devices in a similar way to self winding watches. Most futuristically, the physical resistance offered by the human body could be used in implementing a keypad or other input devices over an area of skin.

--*Dr. Veenu Sisodia*
HOD, Dept. of Physics

PHOTONICS

Photonics is the science and technology of generating, controlling and detecting photons, particularly in the visible light and near infra-red spectrum. Photonics as a science is closely related to quantum optics and optoelectronics with somewhat unclear boundaries. "Quantum optics" often means fundamental research and "Photonics" often means more application related research. "Optoelectronics" is somewhat narrower than "photonics". The overlap between all these fields and "optics" is unclear, and different

definitions are used in different parts of the world and in different industries.

The term "Photonics" sometimes, but not always, implies a goal of establishment of electronics of photons instead of electrons.

The field of "Photonics" has a strong interest in optical communication. The science and application of photonics are usually based on laser light.

The science of Photonics includes the emission, transmission amplification, detection, modulation and switching of light. Photonics devices includes devices such as lasers & photodetectors as well as optical fiber, photonic crystals, planer waveguides and other passive optical elements.

Photonics as a field began in 1960, with the invention of laser, followed in the 1970s by the development of optical fibers as a medium for transmission of information using light beams, and the Erbium-doped fiber amplifier. These inventions formed the basis for the telecommunications revolution of the late 20th century and provided the infrastructure of internet.

Photonics as a field was largely focused on communication, until the dot com crash circa 2001.

However, photonics covers a huge range of science and technology applications, including :

- laser manufacturing
- biological and chemical sensing
- medical diagnostics and therapy
- display technology

- optical computing

Various non-telecom photonics applications exhibits a strong growth particularly since the dot com crash, partly because many companies have been looking for new application areas quiet successfully. A huge further growth of photonics can be expected for the case that the current development of silicon photonics will be successful.

It has further applications also :

- Barcode scanners, CD/DVD/Blu-ray devices, remote control device.
- Optical fibre communication.
- Correction of poor eye sight, laser surgery, surgical endoscopy, tattoo removal.
- Use of laser in welding, drilling, cutting.
- In aviation-photonic gyroscopes lacking any moving parts.
- IR sensors, mine laying & detection in military.
- Entertainment laser shows, beam effects, holographic art.

--Priyansh Laddha
I B.E. (ECE)

DOT-COM START UP

Working on a dot com start-up has become increasingly fashionable these days. Some important points should be kept in mind before embarking on the dream project.

This is essentially the transformation of an idea into a company. As your idea gets momentum, you need to gain traction for the business with alliances, partnerships and a "world class" team. You want everyone from the chief technology officer to the angel investor thinking about your idea, you want everyone to lean forward a bit further every time they hear from you. What brings about such devotion? A management team for a beginning.

Think of everyone as a potential investor. It is important to remember that everyone from your neighbour to colleague is a prospective investor. You need to raise money from everywhere and everyone and this requires salesmanship of course. But the money is there waiting to be invested.

Most start ups fail because they run out of cash. Thus, you need to track your "burn rate". More simply put, it is the rate at which you are burning through cash. This is true for any start up, but the odds of running out are higher with an internet business, given the uncertainity of revenues and the need to ramp up with astonishing speed. Know the lingo. It's not gibberish it means something. Web entrepreneurs have their own language. Learning the language helps you develop e-business strategies and communicate with your peers.

Software companies have long used 'beta' releases to let customers try out product prior to its official launch. Successful web business do the same. You should launch in beta, with no public relations, no publicity not a single penny spent on ad campaign, instead you should let the customers play with the site and tell you what works and what doesn't.

Mistakes made in beta can be for given, but once live, nothing is forgiven by the customers. Get a core beta testing group, hand out freebies like mugs, T-shirts, pens etc. to this group they are the ones who will be able to tell you what really works and what absolutely doesn't.

One attraction of the web is the chance to participate, rather than just buy or watch. This is evident in not just chat rooms but at e-tailers like Amazon.com, where you can write your own book reviews. Letting your customers create content for you is not only free labour, that's the least of it.

Launching a web-site is just an experiment in the chaotic, ever changing world of web commerce, where the strategies come and go, lingo changes from one day to the next, and where the growth probabilities are limitless. To run a start up, you have to strive an experimentation and be willing to take risks and develop new, untested strategies.

All this is possible only if you take your idea and run with it. Ideas are plenty. It is their execution which makes all the difference. In the end, it is the one, who acts on the idea who is eventually the winner. All the rest are just readers of the success story.

--Priya Agrawal
IV Sem., IT

BLUE TOOTH TECHNOLOGY

Well, it isn't some strange form of tooth decay as you might initially imagine. Bluetooth is the name of new technology that is now becoming commercially available. It

promises to change significantly the way we use machines.

Blue tooth essentially aims to replace cables. Conceived initially by Erricson, before being adopted by a myriad of other companies. Blue tooth is a standard for a small, cheap, radio chip to be plugged into computers, printers, mobile phones etc. A blue tooth chip is designed to replace cables by taking information and transmitting it at a special frequency to a receiver blue tooth chip which will then give the information received to the computer, phone whatever.

That was the original idea, but the originators of original idea soon realised that a lot more was possible. If you can transmit information between a computer and a printer why not to transmit data from a mobile phone to a printer or even a printer to a printer?

Blue tooth is a radio standard and communication protocol primarily designed for low power consumption with a short range (1m, 10m or 100m) based around low cost transmitter micro chips in each device. The devices use a radio communication system so they do not have to be in line of sight of each other and can even be in other rooms, so long as the received transmission is powerful enough.

Name Bluetooth was derived from the cognomen of a 10th century King Herald Bluetooth, King of Denmark and Norway from 935 to 940.

Bluetooth technology will meet the high speed demands of synchronizing and transferring large amounts of data as well as enabling high quality video and audio application for portable device. Blue tooth technology will continue catering to the needs of very low power application such as key boards and nano lead sets, enabling devices to select the most appropriate physical radio for the application requirements, thereby offering the best of both worlds.

--Aditi Tiwari
IV Sem., IT

ROBOTICS SYSTEMS AND ROBOT ANATOMY

An industrial robot is a re-programmable multifunctional manipulator designed to move materials, parts, tools or special devices through variable programmed motions for the performance of a variety of tasks.

A robot is a system as it combines many subsystems. The subsystems interacts among themselves as well as with the environment in which the robot works indicate a robot has many components which includes :

1. A base fixed or mobile.

2. A manipulator arm with several degree of freedom (DOF)

3. An end effector or gripper holding a parts or a tool

4. Actuators or drives to causing the manipulator arm or end effector to move in a space.

5. Controller with hardware and software support for giving commands to drives.

6. Sensors to feedback the informations for subsequent actions of the arm or gripper as well as to interact with the environments in which the robot in working.

7. Interfaces connecting the robotics subsystems to the external worlds.

Robot anatomy deals with the types and size of these joints and links and other aspects of its physical constructions.

--Vishnu Dev Bhardwaj
I B.E. (Mech. Engg.)

GOD'S OWN TECHNOLOGY NANOTECHNOLOGY

Nano technology is one of the most significant technology for future as it will cover materials, devices, bio technology and many more. Nano science is based on length scale nano, which is a billionth of a meter. The length scale nano is very important as we need to miniaturize our technologies and badly in need for the transition from the existing micro-technologies to more smaller sizes.

Electronics had been a real driver as this area has a clearly defined road map for miniaturization and the next frontier is nano-technology. Interestingly biological sciences also have strong structures in nano scales : DNA, proteins etc; the essential building blocks of a life have nano scale dimensions.

The most important aspect which makes nano fundamentally existing is that the significant changes in the physical properties are observed in many systems as the size becomes smaller. This fruitification does not happen at all sizes. but at certain points as we minimize the size quantity transforms into quality or the behaviour of bulk character changes to something different and

the sizes for which this transition occurs fall in the nanoscale.

Electronics industry has been crucial to this technology as almost all the components on any future computer chip will be entirely based on nano technology. Nano technology will benefit many other industries namely alternative energy, health care and medicine, sensor technologies, material manufacturing including sports goods, aeroscape transportation and smart coating etc.

Nanotech can influence future industry and society as there will be the short term value added proportion using nanotech that will enable improvements of existing technologies. Addition of nano materials to enhance the mechanical properties of composites used in aeroscape is a good example. Although the process of value addition could be in same cases. Very challenging, catagorised as disruptive technologies. The real impact of nano technology will come in long term based on innovations for example single molecule based electronics, quantum wires, spintronics, smart nano particles based drug delivery systems, nano electro-mechanical systems based sensors etc. An enormous amount of knowledge based which is been created by scientist today is preparing a strong foundation for a future technological revolution.

--Yogesh Chandra Sharma
Senior Lecturer, Dept. of Physics

WILL PLUTO LOSE ITS PLANET STATUS

Pluto has never been much of a planet -small, wired orbit, not much

atmosphere and questions about its status have been raised periodically since its discovery 76 years ago.

This week, the international body with the power to decide what is and is not a planet will consider a new definition that could expand the number of planets in our solar system or demote Pluto to mere "Kuiper Belt object."

Talk about culture shock. Pluto's been a planet for 76 years. It's one of the nine we memorized in school. It's the only planet discovered in the United States done right here in Arizone by a high school graduate from Kansas named Clyde Tombaugh, who was working at Lowell Observatory in Flagstaff.

The International Astronomical Union, which meets in Prague this week, hasn't tipped its hand. Its committee deliberations on crafting the definition of planet have so far remained secret. It hasn't even revealed the process by which it will make a decision, though it promises to outline at a press conference on Wednesday. If Pluto doesn't fit the definition, we're back to the pre 1930 count of eight planets Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune.

If the definition is broad enough to include Pluto, other round, sun-orbiting bodies could become planets as well. The folks at Lowell Observatory, which rocketed to astronomical prominence with the 1930 discovery, are speechless about the whole thing. They met on the subject Friday and decided to make no comment until a decision is announced, said spokesman Steele Wotkyns.

Cal Tech planetary astronomer Mike Brown, co-discoverer of what could become the 10th planet, doesn't think the international group should expand the definition of a planet in a manner that would include his discovery. "If the IAU had guts, it would stand up and say 'Look guys, there are eight planets," Brown said. "That's the best bet for getting a scientific definition. To me, it's a simple concept. The first eight planets are significantly bigger than everything else."

Brown calls the notion of a more expansive definition the "No Ice Ball Left Behind Act."

Brown, in a sense, began this latest round of arguments in 2003 when he and two colleagues discovered a Pluto style body officially known as UB313.

Called "Xena" for convenience, it's another icy dwarf with a round shape that orbits the sun in an elongated ellipsis. It's just like Pluto, only a little bit bigger and further out in that region of iced-over spheres, comets and asteroids past Neptune, dubbed the Kuiper Belt.

It would be tough to write a definition of planet that includes Pluto and doesn't include his discovery, Brown said.

But if they call UB 313 a planet, said Brown, they might have to add another 20 bodies he's discovered and a few dozen more, many of them found by the astronomers at Lowell Observatory. "I did a count the other day and came up with 53," Brown said.

Alan Sten, principal investigator for a NASA mission to Pluto that should fly by the planet in another nine years, thinks Pluto, Xena and

the other orbiting icy dwarfs hidden among the comets and asteroids of the Kuiper Belt are planets.

"Start showing pictures to folks on the street and they'd make the obvious conclusion that they are plants," he said. "A chihuahua may be small but it's still a dog."

Stern, the executive director of the space science and engineering division at the Southwest Research Institute in Boulder, Colo, said the IAU should simply let in a whole new class of planets, calling them and Pluto "dwarf planets" to differentiate them from the big eight.

"A chihuahua may be small but it's still a dog," Stern said. You wouldn't misclassify the Platte as not a river just because it doesn't remind you of the Mississippi, he said.

Mark Sykes, director of the Planetary Science Institute, with headquarters in Tucson, said he hopes the international body doesn't take the politically easy route of creating a definition that grandfathers Pluto as a planet and rejects the latest discoveries and new planets awaiting discovery.

Pluto and the other ice dwarfs of the Kuiper Belt aren't meteorites or comets, Sykes said. They are more akin to planets than anything else. "Having sufficient size to be round is the main criteria, " he said.

Tucsom astronomer David Levy agrees.

Levy was a close friend of Clyde Tombaugh, who died in 1997. He wrote the biography "Clyde Tombaugh : Discoverer of Planet Pluto."

"The Earth has much more in common with Pluto than with say,

Jupiter, "Levy said. "You can walk on Pluto, there are three moons in its sky. Land on Jupiter, you'd just fall right in. Jupiter and the Earth have almost anything in common, yet they're both called planets without any debate."

Levy, science editor for Parade Magazine and discoverer of 21 comets, said he would settle for a definition that a planet is a spherical body orbiting the sun that is "the size of Pluto or bigger."

He is willing to change his mind, however, per his late friend's instructions.

"Clyde himself said, 'When they send the mission to Pluto and it arrives there and there is a big sign on it that says, "I am not a planet, Clyde," then I'll be happy to denote it.' "

--Anirudh Jain
I B.E. (C S)

Fluoride in drinking water; An overview

Throughout many parts of the world high concentrations of fluoride occurring naturally in ground water have caused widespread fluorosis a serious bone disease among local populations. We purposely fluoridate a range of everyday products notably toothpaste because for decades we have believed that fluoride in small doses has no adverse effects on health.

Fluoride exists abundantly in earth's crust and enters groundwater by natural processes; the soil at the foot of mountains is

particularly likely to be high in fluoride from the weathering and leaching of bedrock with a high fluoride content. In groundwater concentrations of fluoride depends on the geological, chemical and physical characteristics of aquifier, the porosity and acidity of soil and rocks, the temperature, the action of other chemical elements and the depth of wells.

What is Fluoride ?

Fluoride is a salt of fluorine. Fluorine is highly reactive element of halogen family. It is found in sea water, ground water, bones and teeth in small quantities. Fluoride associated with monovalent cation (like NaF and KF) is soluble in water while fluoride associated with divalent cation (like $CaF2$ and $PbF2$) is insoluble in water.

Fluoride is more toxic than lead and less toxic than arsenic and is an accumulative toxin.

Fluoride : Good or bad for health ?

According to 1984 guidelines of WHO fluoride is an effective agent for preventing dental cavities if taken in optimal amounts. But a single optimal level for daily intake can not be agreed because the nutritional status of individual influences the rate of adsorption of fluorine in the body. A diet poor in calcium increases the body's retention of fluorine. An intake of more than 6mg of fluoride per day result in fluorosis. Fluorine is a cumulative, bone-seeking material. It increases the stability of crystal

lattice in bone but makes the bone more brittle.

Fluoride was first used to fight dental cavities in 1940s, its effectiveness defended on two grounds

- Fluoride inhibits enzymes that breed cid-producing oral bacteria whose acid eats away tooth enamel this observation is valid, but some scientists now believe that the harmful impact of fluoride on other useful enzymes far outweighs the beneficial effect on carries prevention.

- Fluoride ions bind with calcium ions, strengthening tooth enamel as it forms in children. Many researchers now consider this more of an assumption than fact,

Now it is universally excepted that excessive intake of fluoride leads to loss of calcium from the tooth matrix, aggravating cavity formation throughout life rather than remedying it, and so causing dental fluorosis, severe, chronic and cumulative overexposure can cause the incurable crippling of skeletal fluorosis.

Symptoms of fluorosis

Dental fluorosis is characterized by discoloured, blackened, mottled or chalky white teeth. It is a clear indication of over exposure of fluoride during childhood when the teeth were developing. These effects are not apparent if the teeth were already fully grown prior to the fluoride overexposure.

Chronic intake of excessive fluoride can lead to the severe and permanent bone and joint problems. The early symptoms include sporadic pain, stiffness of joints, headache, stomach-ache and muscle weakness. The next stage is osteoporosis in which bones are hardened and calcified. Finally the spine, major joints, muscles and nervous system are damaged.

There is no treatment of fluorosis. The only remedy is prevention by keeping fluoride intake within safe limits.

Preventing fluoride poisoning

Fluoride poisoning can be prevented or minimized by using alternative water sources, by removing excessive fluoride from drinking water, and by improving the nutritional status of populations at risk.

Alternative Water Sources

These include surface water, rainwater, and low-fluoride ground water.

Surface Water : Particular caution is required when opting for surface water, since it is often heavily contaminated with biological and chemical pollutants. Surface water should not be used for drinking without treatment and disinfection. Many water treatment technologies are available, but the most effective are usually too expensive and complex for application in poor communities. Simple and low-cost technologies, such as sand filtration, ultraviolet water disinfection or chlorine water disinfection, are adequate in some but not all cases. Community capacity is an essential factor in ensuring successful utilization of these technologies. Water chlorination at household level is widely used only in emergencies.

Rainwater. Rainwater is usually a much cleaner water source and may provide a low-cost simple solution. the problem, however, is limited storage capacity in communities or households. Large storage reservoirs are needed because annual rainfall is extremely uneven in tropical and subtropical regions. Such reservoirs are expensive to build and require large amounts of space.

Low-fluoride groundwater. Fluoride content can vary greatly in wells in the same area, depending on the geological structure of the aquifer and the depth at which water is drawn. Deepening tube-wells or sinking new wells in another site may solve the problem. The fact that fluoride is unevenly distributed in groundwater, both vertically and horizontally, means that every well has to be tested individually for fluoride in areas endemic for fluorosis : extrapolating sample tube well tests to a large area does not provide an accurate picture.

Defluoridation of water

There are basically two approaches for treating water supplies to remove fluoride : flocculation and adsorption.

Flocculation. The Nalgonda technique (named after the village in

India where the method was pioneered) employs this principle. Alum (hydrate aluminium salts) - a coagulant commonly used for water treatment is used to flocculate fluoride ions in the water. Since the process is best carried out under alkaline conditions, lime is added; bleaching powder can also be added to disinfect the water. After a thorough stirring, the chemical elements coagulate into flocs that are heavier than water and settle to the bottom of the container. The operation can be carried out on a large or small scale, and the technique is suitable for both community or household use. One household version uses a pair of 20 litre buckets, with a settling time of one hour and not more than two hours: after coagulation and settling are complete, the treated water is withdrawn through a tap 5 cm above the bottom of the first bucket, safely above the sludge level, and stored for the day's drinking in the second bucket.

Adsorption. The other approach is to filter water down through a column packed with a strong adsorbent, such as activated alumina (Al_2O_3), activated charcoal, or ion exchange resins. This method, too, is suitable for both community and household use. When the adsorbent becomes saturated with fluoride ions, the filter material has to be backwashed with a mild acid a alkali solution to clean and regenerate it. The effluent from backwashing is rich in accumulated fluoride and must therefore be disposed off carefully to avoid recontaminating nearby groundwater.

Both the community and household defluoridation systems have pros and cons. Defluoridation equipment connected to a community handpump is theoretically cheaper per capita than a household unit because of economics of scale; but ensuring proper maintenance of a commonly owned facility is often problematic, so good community organization is necessary. The household units are more convenient for filtering the small amounts of water intended for drinking only, and people usually take better care of them; but an extensive and efficient service system is required to ensure that the filters are replaced or regenerated at the right time. Technology is only part of the issue: local capacity building, including entrepreneurial capabilities, can be a far more critical and difficult task.

Better nutrition

Clinical data indicate that adequate calcium intake is clearly associated with a reduced risk of dental fluorosis. Vitamin C may also safeguard against the risk. In consequence, measures to improve the nutritional status of an affected population particularly children appear to be an effective supplement to the technical solutions discussed above.

--Dr. Archana Saxena
Reader, Dept. of Chemistry

VALIDATION OF BIG BANG THEORY

Big Bang Theory predicts that the universe is about 14 billion years old. In exact terms "the universe exploded into being from a point (reason to say "The Big Bang") at a certain instant in time as an extremely hot and dense soup of exotic particles". About 4 Lac years after, the universe was enough expanded and the temperature of this hot and dense particle cloud was dropped to around 3000 Kelvin electrons, protons, neutrons and photons started to combine to form atoms, mostly of hydrogen. The transparent nature of neutral hydrogen permitted light photons to propagate freely into space. This "relic of origin" is still expanding with the universe.

Just after the Big Bang, thick fog of particle cloud was opaque like an enclosed space with no energy leakage similar to a "black body", and light remained trapped inside of it. As known, the radiations emitted by such a body are independent of the composition of the source and depends only upon the temperature. Hence this light must contain all the mysteries of the "zero moment". Although the expansion and cooling of the universe decreased the frequency of this radiation but if the Big Bang theory is a correct one, this radiation, namely, Cosmic Microwave Background (CMB) must be distributed isotopically in all possible directions.

In 1964 while trying to understand the source of unexpected noise in their radio receivers, Penzias and R. Wilson discovered the CMB, inadvertently. Alpher, Herman and Gamow predicted the existence of this radiation earlier in 1948, which was an expansion of the thought of

Tolman i.e., "black body radiation retained its nature in an expanded universe". This discovery immensely popularized the Big Bang theory. A number of experiments were performed using ground, balloon and rocket based instruments. All these experiments were suffered by the feeble intensity of CMB due to atmospheric absorption and A remained to settle down whether the observed radiation had the black body form. Also the presence of galaxies suggests that the large-scale structure of the universe could arise only if small anisotropies had existed in this background radiation. Additionally, aggregation of the matter at some places, in the earlier age, should show up small temperature variations. Some theoretical calculations suggested the modalities of these predictions, but earlier observations were not able to pick up the signatures.

Hence NASA initiated the COBE (Cosmic Background Explorer) project in 1974. After 15 years on 18th November 1989 Cosmic Background Explorer Satellite was launched. It carried three instruments 1. Diffuse Infrared background experimental kit, 2. Differential Microwave Radiometer and 3. Far Infrared Absolute Spectrometer to measure the anisotropy and spectrum of the CMB as well as diffuse infrared background radiation. The mission proved enormously successful. The observations of it had a prefect black body shape of radiation and temperature variations also followed the theoretical predictions

very well. The importance of this study was best recognized in the words of Stephen Hawking "the greatest discovery of the century, if not all times".

The Nobel prize in Physics for year 2006 was conferred for "discovery of black body form and anisotropy of the cosmic microwave background radiation" to J. C. Mather and G. F. Smoot, USA. They had determined the true form of CMB and were able to measure the small variations in different directions. This study used the data observed by Cosmic Background Explorer Satellite. Their work, in the words of P. Carlson, Chairman of Nobel Committee for Physics "... have not proven the Big Bang theory but gives a very strong support...".

Further, more advanced experiments are going on, as Wilkinson Microwave Anisotropy Prob which will study the temperature variations in the CMB, necessary to explain the galaxy formation. Such type of measurements face greater challenges as these signatures will be very faint. These facts paved the path of the emergence of astro-particle physics, the interface between cosmology and the physics of elementary particles. Now the main task is to understand what happened just before, during and just after the moment when the CMB was emitted. Existing theories like, "inflationary universeme universe was exponentially expanded within the fraction of a second just after the Big Bang", tells very little about this epoch.

In this backdrop, two parallel activities are going on which will hopefully provide some strong clues (if not definite answers) regarding the validation of the Big Bang theory. One is the proposed launch of European Satellite Planck in July, 2008; advanced CMB prob mission which will investigate the polarization of CMB. The key questions which will be dealt by using the data of this mission are: age of universe, nature of "dark matter" and "dark energy" and limit of the "Big Bang expansion". On the other hand the investigations are going on using the New Large Hadron Collider at CERN, Geneva. These experiments are mainly aimed to understand the nature of dark matter and other exotic particles which makeup the universe. This will also help us solve the puzzle of antimatter which was thought to be a perfect 'reflection' of matter i.e. the mirror image of it. But studies have proved that the reflection theory is incomplete which may lead to the matter-antimatter imbalance.

A large number of questions are yet to be answered. History of Science has shown that the greatest advances are often unexpected and nature may well have some surprises left in her store. Certainly time may change our view about the universe. It means that Big Bang, greatest cosmological question contains the potential of some more Nobel and other prizes.

--*Yogesh Chandra Sharma*
Senior Lecturer, Dept. of Physics

Raja Ram Meel
Patron
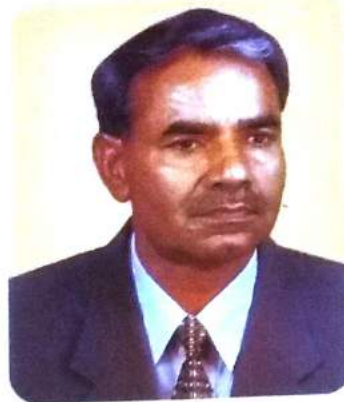
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Ramesh Pachar
Head, Electrical
Engineering Dept.

Prof. R.S. Mehta
Head,
Management Studies

V.S. Bhatnagar
Reader, Electronics
& Communication Dept.

Alok Mathur
Reader, Mechanical
Engineering Dept.

Vinod Kataria
Reader, Electronics
& Communication Dept.

Inauguration of exhibition of defense artillery of Kumaun Regiment by Shri Swaroop, M.D. Rajasthan Renewable Energy Corp. Ltd.

Lightening Lamp of Annual day function by Sh. K.R. Bagaria (Director), Sh. S.R. Meel (Chairman) Sh. A.K. Pandey, Chief Secretary, Development Commissioner, Sh. G.S. Sandhu (I.A.S.), Principal Secretary of Technical Education

Lightening lamp of inauguration function of ISTE by Prof. N.R. Shetty, President, ISTE

Blood Donation Camp Organised by Youth Red Cross Club

Pravah 2007 : Guests Revered

Pravah 2007 : Cultural Kaleidoscope

ANNUAL DAY FUNCTION
1ST MARCH·2007

WHY SHOULD COLOR DIFFERNTI US??

PRAVAH - 2007

Pravah 2007 : Cultural Kaleidoscope

Pravah 2007 : Guests Revered

Prof. N.R. Shetty, President of ISTE, being awarded by Sh. S.R. Meel, Chairman, SKIT

Sh. Nagar Mal Moyal, Athlete, being greeted by students

Dr. Suman Kapoor, Prof. BITS, Pilani, being greeted by students

Sh. A.K. Pandey, Add. Chief Secretary, Development Commissioner being greeted by Sh. S.R. Meel, Chairman SKIT

Sh. G.S. Sandhu, IAS Principal Secretary, Technical Education being honoured by Sh. S.R. Meel, Chairman SKIT

Sh. Madhukar Gupta, Divisional Commissioner, Jaipur being honoured by Sh. S.L. Surana, Principal SKIT

Richa Sharma (E&C) receiving Prof. Alam Singh Trophy from Shri A.K. Pandey, Add. Chief Secretary, Development Commissioner

Kriti Singh (E&C) receiving Prof. R.S. Nirjar Trophy from Shri A.K. Pandey, Chief Secretary, Development Commissioner

Pravah 2007 : Awards of Academic Excellence

Sh. G.S. Sandhu (I.A.S.), Principal Secretary of Technical Education giving away
Academic Prize to Vijay Talreja (ME)

Sh. Madhukar Gupta, Divisional Commissioner, Jaipur giving away
Academic Prize to Ruchi Ajmera (EE), Pass-out Student of 2006 Batch

IT Department

Electrical Engineering
Department

Computer Science
Department

Our Proud Culminations

Our Proud Culminations

Students Selected in
Tech. Mahindra, Mumbai

Students Selected in
Infosys Technologies Ltd.,
Bangalore

Some of 2008 Batch Students
Selected in Various Campus
Placements

Students Selected in
Birla Soft, Bangalore

Students Selected in
L&T (e-solutions), Mumbai
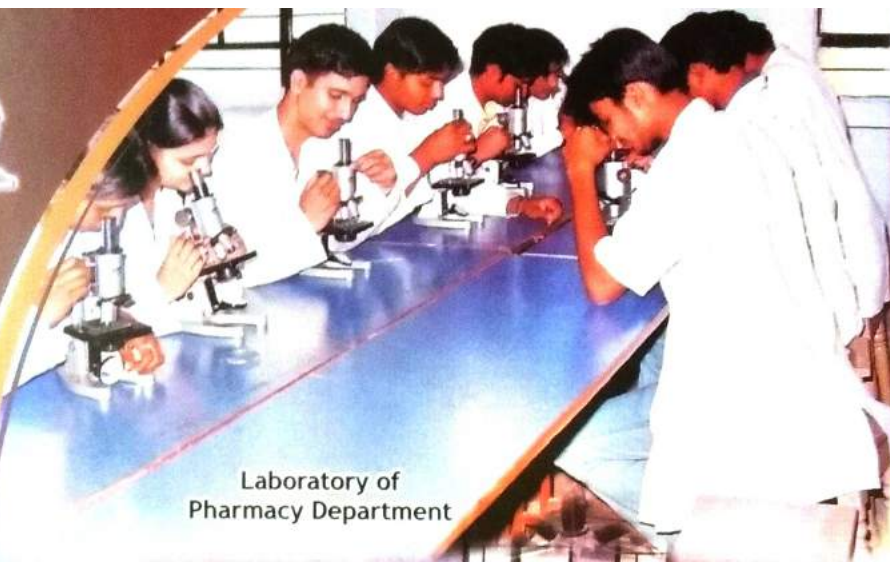
Students Selected in
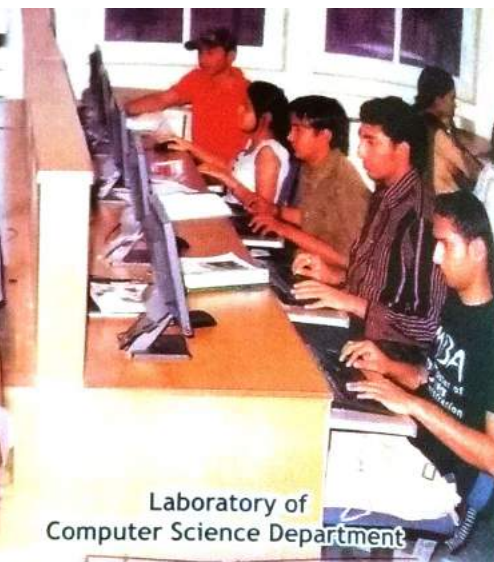L&T Infotech, Mumbai

Students Selected in
Persistent Systems, Pune

Students Selected in
Accenture Services Pvt. Ltd.,
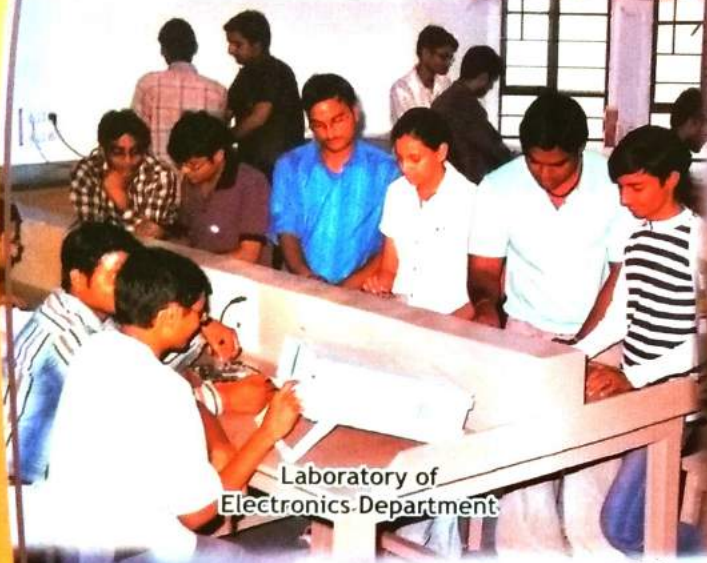Bangalore

Our Proud Culminations

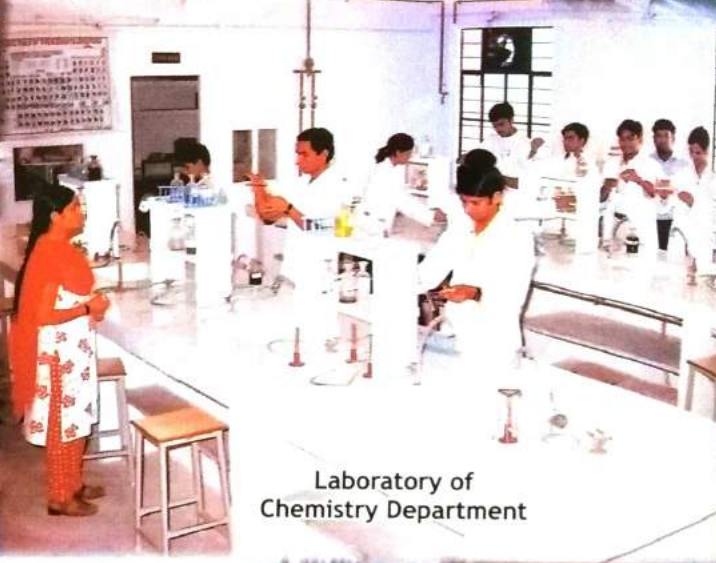Infrastructure Augmentation

Laboratory of
Pharmacy Department

Laboratory of
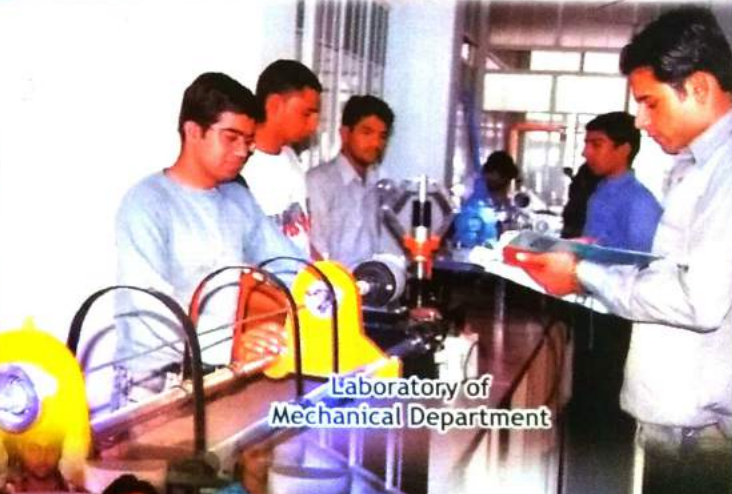Computer Science Department

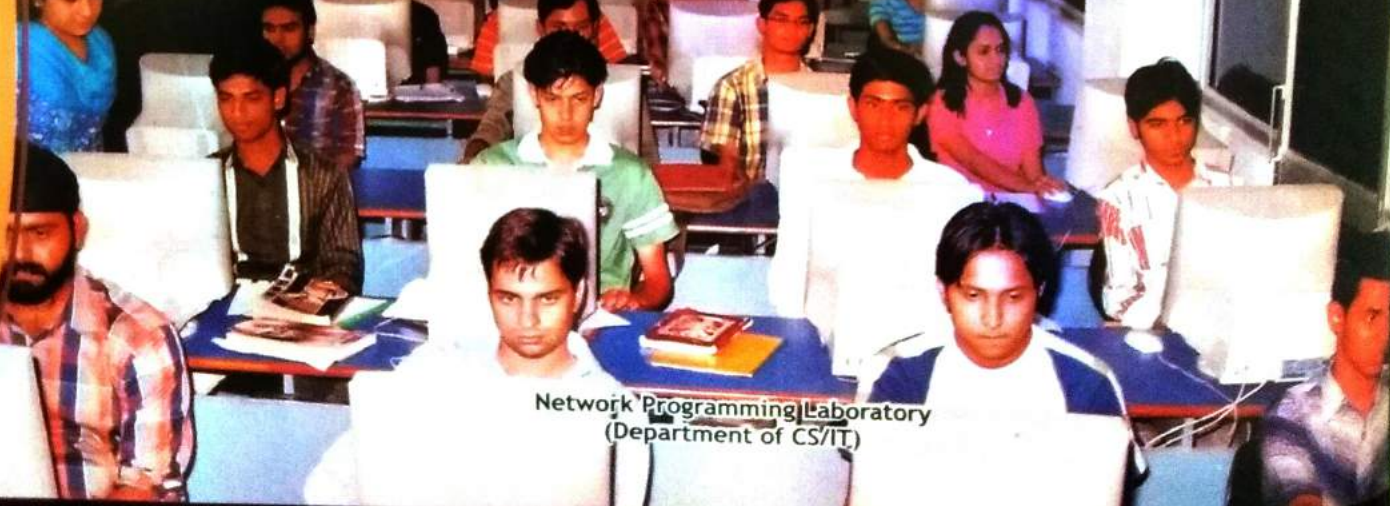Laboratory of
Electronics Department

Laboratory of
Chemistry Department

Laboratory of
Mechanical Department

Laboratory of
Mechanical Department

Network Programming Laboratory
(Department of CS/IT)

Reflections

mirroring the inner being

A NEW WAVE IN EARLY WARNING SYSTEMS AND TSUNAMI TECHNOLOGY

The utter shock of the December 26th 2004 Indian Ocean Tsunami encouraged many countries to bond together in support with financial aid as well as dramatic plans to implement better tsunami early warning systems. The United Nations recently called for the implementation of a global early warning system. Such a plan requires not only earthquake and tsunami detection technology, but also real time communications systems and public education. The biggest problem is not whether earthquakes and tsunamis can be detected, but how to get the message out.

During the first week of 2005 the German government announced its plans to lead the way in new early warning systems technology. The German Research Minister, Edelgard Bulmahn, told daily newspaper Frankfurter Allegmeine, 'With our concept, we will be able to come up with an effective system within one to three years at a cost of 40 million euros (52 million dollars).'

The project hopes to add thirty or forty additional seismological stations in the Indian Ocean to an already existing global network. In conjunction with other nations, there could be as many as 250 new seismology stations in the near future monitoring the Atlantic and Indian Oceans as well as the Mediterranean Sea. Should an underwater earthquake be detected, the Internet and SMS text messaging will be used to alert regional data stations in real time. The deployment of communications technology is an intrinsic aspect of the system. The project will initially work with Indonesia and Sri Lanka.

The Indian government also announced early January 2005 its plans to dedicate $34.8 million towards Deep Ocean Assessment and Reporting System or DOARS. Technology minister Kapil Sibal announced that DOARS, along with a software program, would be used to monitor seismic changes underwater. DOARS, placed six kilometers under the Indian Ocean, will be able to detect even the slightest changes in water movement. In addition India hopes to work in cooperation with other countries such as Sri Lanka, as well as the already established Pacific Tsunami Warning Center. The PTWC network is composed of 26 Pacific Rim nations including Japan, United States, Canada, Philippines and Singapore.

The PTWC was established in response to the April 1st 1946 earthquakes along Alaska's seismic sub-duction zones off the Aleutian Islands. After hitting the Alaskan coast the tsunami took only a couple hours to reach Hawaii, killing a total of 165 people in its wake.

Whereas tsunamis in Alaska, and Hawaii are relatively common. Historically the Indian Ocean has not seen many tsunamis. Warning systems were thought to be redundant in light of the rarity of tsunamis in the area. According to the Indian government the last Indian Ocean tsunami was in 1883. However, recent studies indicate that the December Indian Ocean Tsunami was not an anomaly. In fact studies suggest that the Indian Ocean is capable of producing mega-tsunamis in the future.

The hazard with tsunamis is their volatility and force. Once a tsunami forms nothing can stop it. There is little warning and very little that can be done to protect a coastline. However, not all underwater earthquakes cause tsunamis. This means that technology that reads seismic changes will not always predict the advent of a monster wave. It is for this reason that strategic communications planning will lead the development of early warning systems.

Basic tsunami education and awareness is also necessary. The small town of Sitka, Alaska is a good example of community tsunami vigilance. Tsunami-warning drills are common. The public radio station, Raven Radio, and the local daily paper, The Sitka Sentinel, alerts the public through

service announcements to observe the tsunami warning alarm. Tsunami direction signs that point out routes to higher ground, and emergency procedures are a constant reminder of the threat. In addition, coastal Alaskans are taught the signs of an impending tsunami. A dramatically receding shoreline, for example, is a telltale sign that something is wrong. In 1964, when one of the largest tsunamis in American history hit the Alaskan coast, only 100 lives were lost. In Sitka the shoreline receded nearly a mile grounding many of the town's fishing boats that rested in the harbor.

Tsunamis are an unpredictable and violent phenomenon. There is little to stop them. New technology systems are becoming more and more attuned to even minute seismic changes in the ocean. However it is communications systems and education that will prove to be the greatest protection against tsunami devastation.

--Tarannum Sheikh

Lecturer, Dept. of CS/IT

EMOTIONAL INTELLIGENCE

An important expectation of various employers is high "Emotional Intelligence" in their employees or potential employees, in addition to their technical expertise and university degrees. A term "soft skills" has been made popular in recent years by employing agencies, which to a very large extent is looking at some of the dimensions of emotional intelligence. The purpose of this paper is to introduce the term emotional intelligence, and its dimensions, which will pave the way for your achieving those competencies which result in high emotional intelligence.

The term "emotional intelligence" became popular after Nancy Gibbs wrote an article in Time Magazine in October 1995, where she quoted the book" Emotional Intelligence Why it Matter more than IQ (1995) by Daniel Goleman (Bantam Books)". Due to this publicity, the book remained in New York Times Best Seller List in non-fiction category for one-and-a-half-years. Goleman published several books and articles about emotional intelligence and its application to business. One of his later books" Working with Emotional Intelligence (1998), Bantam Books", has received equal appreciation.

Although the term "Emotional Intelligence" became popular after Goleman's writings, Wayne Payne used the term much earlier (1985). Interestingly a Dutch novelist Carl Lans used this term in sixties in two of his novels. As these novels never got translated in English, nobody in English speaking world knew about the term.

Psychologists have done a lot of research in this area in recent years. We will discuss Emotional Intelligence, as discussed by Goleman. According to Goleman, " Emotional Intelligence is our capacity in recognizing our feelings and feelings of others for the purpose of motivating ourselves, and for managing emotions in ourselves and in our relationships with others."

Various emotional and social competencies included in emotional intelligence are:

- Self-awareness,
- Self-regulation,
- Self-motivation,
- Empathy, and
- Social Skills.

Self-awareness means recognizing our own emotions and their effects on others and us. Self-awareness includes

- Accurate self-assessment of our own inner abilities and their limits, and
- Self-confidence, implying a strong sense of self-worth and abilities.

Once there is self-awareness, it should be possible for us to achieve 'self-regulation'. Self-regulation means

- Self-control i.e. we are able to keep disruptive emotions in check,
- Trust-worthiness i.e. we can be trusted, we display honesty and integrity in our actions,
- Conscientiousness i.e. we are able to judge what is right or wrong, thus we are dependable and we display high order of responsibility,
- Adaptability i.e. we are flexible

enough in adjusting to new conditions and are able to handle changes well, and

- Innovation i.e. we are open to new ideas.

Self-motivation is another important competency of emotional intelligence. Selfmotivation means that we have an inner urge that strives to improve and persuade us to achieve excellence. Self-motivation leads to

- Commitment which means that we try to align our goals with the goals of the organization,

- Initiative which means we display readiness in initiating an action, and .

- Optimism which means that we develop a tendency to look on the more favourable side of happenings, and display persistence.

Empathy is next competency of emotional intelligence. Empathy is different from sympathy which is lip service. Empathy is looking at feelings, viewpoints, problems, etc. wearing the shoes of the other person i.e. taking the role of the other person. This implies that we try to look at an issue from the point of other person, and not from our own perspective. Empathy involves

- Understanding others by our ability to sense their feelings, viewpoints, problems etc.,

- Developing others by our ability to sense their developmental needs, and then

providing opportunities for fulfillment of these needs, and

- Customer focus of empathy by our ability to anticipate, recognize and then fulfill customer needs.

Social skills, which form the next dimension of Emotional Intelligence, include following skills:

- Influence which means our ability to persuade.

- Communication which means listening attentively, and receiving both verbal and non-verbal messages from sender without loss. It also means responding appropriately by sending verbal and non-verbal messages back to the sender.

- Conflict management which means understanding the nature and reason of conflict, and negotiating and resolving disagreements which result in conflicts.

- Leadership which has to be inspiring, and which should guide the individuals.

- Change catalyst which means that we are able to initiate and manage the change.

Emotional intelligence is a highly effective tool. Hypothesis is that it can be learnt. It means that all of us can improve our emotional intelligence level by constant effort.

Emotional intelligence is often measured as an Emotional Quotient or EQ. Many researchers have developed instruments to measure

EQ. Some are in the form of quiz, some as self-report inventories. Some elaborate instruments use individual, peers, superiors, as well as family members, as respondents. One example of online Emotional Intelligence Quiz is by eiHay Group: Emotional Intelligence Services.

We have seen that Emotional Intelligence is focusing on those competencies which relate to an individual's development as a good human being who is able to recognize and regulate emotions, do self-motivation, is empathetic, and possesses expected social skills.

--Dr. N.K. Banthiya
Head, Dept. of ME

LIGHTEN UP! TRY THE 90/10 SECRET

- MILLIONS of people suffer from undeserved stress, trials, problems, and heartache. They never seem to be a success in life. Bad days follow bad days. Terrible things seem to be constantly happening. There's constant stress, lack of joy, broken relationships. Worry consumes time, anger breaks friendships and life seems dreary and is not enjoyed to the fullest. Friends are lost. Life is a bore and often seems cruel. Does this describe you? If so, do not be discouraged. You can be different ! Understand and apply the 90/10 secret. It will change your life!

- Ten per cent of life is made up

of what happens to you. Ninety per cent of life is decided by how you react. What does this mean? We really have no control over 10 per cent of what happens to us. We cannot stop the car from breaking down. The plane may be late arriving, which throws your whole schedule off. A driver may cut us off in traffic. We have no control over this 10 per cent. The other 90 per cent is different. You determine the other 90 per cent!

- How? By your reaction. You cannot control a red light, but you can control your reaction. Let's use an example. You're eating breakfast with your family. Your daughter knocks over a cup of coffee onto your business shirt. You have no control over what just happened. What happens next will be determined by how you react. You harshly scold your daughter for knocking the coffee cup over. She breaks down in tears. After scolding her, you turn to your spouse and criticize her for placing the cup too close to the edge of the table. A short verbal battle follows.

- You storm upstairs and change your shirt. Back downstairs you find your daughter has been too busy crying to finish breakfast and get ready for school. She misses the bus. Your spouse must leave immediately for work. You

rush to the car and drive your daughter to school. Because you are late, you drive 40 miles an hour in a 30mph speed limit. You still get delayed and you arrive at school 15 minutes late.

- Your daughter runs to the building without saying good-bye. After arriving at the office 20 minutes late, you find you forgot your briefcase. Your day has started badly. As it continues, it seems to get worse and worse. You look forward to going home. When you arrive home you find a small wedge in your relationship with your spouse and daughter. Why? Because of how you reacted in the morning.

- You had no control over what happened with the coffee. How you reacted in those five seconds is what caused your bad day. Here is what could have and should have happened. Coffee splashes over you. Your daughter is about to cry. You gently say. "It's OK honey, you just need to be more careful next time." Grabbing a towel you rush upstairs. After grabbing a new shirt and your briefcase you come back down in time to look through the window and see your child getting on the bus. She turns and waves. You arrive five minutes early at work and cheerfully greet the staff. Your boss comments on how good a day you are having. Notice the difference. Two different

scenarios. Both started the same. Both ended different. Why? Because of how you REACTED.

- Here are some ways to apply the 90/10 secret. If someone says something negative about you, do not be a sponge. Let the attack roll off like water on glass. React properly and it will not ruin your day. A wrong reaction could result in losing a friend, being fired, getting stressed out, etc. How do you react if someone cuts you off in traffic? Do you lose your temper? Pound the steering wheel? Do you curse? Does your blood pressure sky rocket? Do you try and bump them? WHO CARES if you arrive 10 seconds later at work? Why let the blue car ruin your drive. Remember the 90/10 principle, and do not worry about it! You are told you lost your job. Why lose sleep or get irritated? It will work out. Use your worrying energy into finding another job.

- To give another example, the plane is late. It is going to mangle your schedule for the day. Why take out your frustration on the flight attendant? She has no control over what is going on. Use your time to study, get to know the other passenger etc. Why get stressed out? It will just make things worse. You now know the 90/10 secret. Apply it and you will be amazed at the

results.

HONESTY IN ENGINEERING AND ON CAMPUS

Engineering is a profession of learned and dedicated people. As professionals, engineers are expected to exhibit the highest standards of honesty and integrity. Engineering has a direct and vital impact on the quality of life for all people. Accordingly, the services provided by engineers require honesty, impartiality, fairness, and equity, and must be dedicated to the protection of the public health and welfare. Engineers must perform their studies under a standard of professional behaviour that requires adherence to the highest principles of ethical conduct.

Honest/Honesty :

- To be free from fraud or deception.
- To be marked by integrity.
- Fairness and straight forwardness of conduct.
- Adherence to the facts.
- Honour, truthfulness, integrity, reputable.

Codes of ethics :

The engineer must :

- be objective and truthful

- be honest and realistic in stating claims, offer honest criticism
- be honest and impartial
- be objective and truthful in professional reports, statements, or testimony
- participate in honest enterprise.
- avoid deceptive acts

"Whoever is careless with the truth in small matters cannot be trusted with important matters."

Albert Einstein

(1879-1955)

"Ideas and Opinions of Albert Einstein"

Science and Engineering

It is an undeniable principle that the entire practice of science and engineering is based on a set of expected ethical behaviour for all involved. This includes the expectation of honesty and truthfulness in all individual activities, contact, and interactions within the profession.

Honesty

"If we consider the engineering profession to be like a building, honesty is its foundation. Without honesty, the value of engineering services is undermined."

Engineers can misuse the truth by :

- failing to communicate the truth
- communicating the truth when they should not

- allowing their judgement regarding the truth to be corrupted.

Long term consequences :

- others will no longer trust you if the lie is discovered
- may require additional lies to cover up the first one
- may unexpectedly mislead others into trouble

Deliberate deception

- Misrepresenting one's expertise or depth of knowledge
- Misrepresenting the value of products
- Inordinately praising the advantage of a certain design
- Engineer should never try to withhold information.
- This is a type of deceptive behaviour, a form of dishonesty by omission.
- Fails to convey information the audience can reasonably expect would not be omitted.
- The intent of the omission is to deceive
- Basically provides only a partial answer rather than a complete one.
- Some moralists view this as acceptable under certain circumstances

Committed for finding the truth

Suppose an engineer suspects that some of the data received from the test laboratory are inaccurate. In using the results, as they are, the engineer is not lying nor concealing

the truth. But the engineer may be acting irresponsibly by using the data as they are without inquiring further into their accuracy.

Engineers must be "committed to finding the truth, not simply avoiding dishonesty."

"Honesty in this positive sense is part of what is involved in being a responsible engineer."

Respect for Persons

Actions are wrong if they violate the moral agency of individuals.

Moral agents are "capable of formulating and pursuing goals and purposes of their own."

During Engineering Education

"A student's experience in engineering school is a training period for his or her professional career. If dishonesty is as detrimental to engineering professionalism as we have suggested, part of this training should be on professional honesty."

Academic dishonesty

"Behavior such as cheating in examinations and lab reports, or plagiarism of course papers and homework assignments are the most often cited violations of academic integrity or academic honesty."

An engineering graduate must avoid cheating :

- During tests and graded exercises
- Working as a member of a team
- Group efforts on homework
- Laboratory reports

- Term papers and other reports
- Using the work of others
- Obtaining excused absences

Engineering contributes :

- To the utilitarian goal
- In providing information important for decision making.

'A lack of trust and truthfulness erodes the very fabric of our society.'

--Ramesh Pachar
Reader, Dept. of EE

"Be Brave take risk, Nothing can substitute experience."

Dr. A.P.J. Abdul Kalam

Dear Readers,

What is the secret of success ?

The road to success has to be paved with hardwork, determination and can't-put-me-down grit. But the secret of success is a great tycoon. Aristotle professed, "In knowing what no one else knows". Yes friends, no one knows your true potential. You need to discover it on your own. Tap your hidden capabilities. You will surely find in yourself vast reserve of energy, resilience and skills. Within you, you shall find all the attributes and characteristics of a creator. Explore the unchanged uncharted waters and ventures where no one has dared.

No one wants to fail. This fear shackles us and inhibits us from even trying. Take a simple lesson from a toddler. From the heavenly cradle of his mother's arms he learns to crawl, touch, feel and

learn. He is very curious to learn. He is not satisfied with crawling. He tries to stand. He falls and gets hurt. He cries. He is not satisfied, yet he tries again only to fall and cry again. But his faith in himself remains unflinching. Without wavering the indomitable, toddler to everyone's delight and surprise, one day stands and stands tall. He knew, despite falls and hurt and tears, he had the strength to explore the world with steady strikes.

Yes, readers, you were once toddlers, who had vowed never to give up. You knew your feet were strong enough to will your feet to take strides.

So, acknowledge yourself. And remember, winning is never easy. Take it as a challenge. Meet the challenge head on. Bounce back with a vengeance. It is a giant leap in restoring your control over your destiny.

Leave the comfort of the known world.

Best Wishes to all readers.

--Vishnu Dev Bhardwaj
VIII Sem. (Mechanical)

I'm very happy to get selected in top software companies in 3rd year itself It's like a dream come true to enter in a corporate world with these software giants. SKIT has provided us an excellent platform and now its up-to us that how high we can fly.

--Vivek Parashar
Selected in Infosys, Accenture

Opinion

we dare to think

ENGINEERING EDUCATION- EMERGING SCENARIO

We live in a time of revolutionary change. Not only is the world relying increasingly on technology for economic growth and job development, but also the nation is passing through challenging transition by refocusing on technology development for national security to international economic competitiveness. At the same time, we view technology as important aid in helping to solve many difficult societal problems, from creating environmentally-sustainable development and improving communications, to devising more effective and cost-efficient health care systems.

Within this technological context, engineers play an important role. They develop new manufacturing processes and products; create and manage energy system, transportation and communications systems; prevent new and redress old environmental problems; create pioneering health care devices; and, in general, make technology work for the betterment of human life. Through these activities, engineers create huge potential for the private sector to develop national wealth. As noted by economic experts, "the nation with the best engineering talent is in possession of the core ingredient of comparative economic and industrial advantage."

And just as important as their specific technical skills, engineers receive valuable preparation for a host of other careers in areas such as finance, medicine, law and management. These professions require analytical, integrative and problem-solving abilities, all of which are part of an engineering education. Thus, engineering is an ideal undergraduate education for living and working in the technological dependent society of the twenty-first century.

Responding to changing needs

One of the strengths of engineering education in India is the broad spectrum of engineering colleges whose development has been unconstrained by a single, centrally prescribed mission. The more than 1500 colleges of engineering range from highly research-intensive institutes to those that focus largely on undergraduate education, with many variations in between. Even with the considerable differences in missions, undergraduate engineering education programs maintain universal core curriculum content and minimum standards through the university to which they are affiliated and All India Council of Technical Education (AICTE). However a partnership between academics and practicing engineers is still missing this need to be developed. Recently, some engineering colleges have forged close relationships with industry

(SKIT with Infosys Technologies Limited) this may prove to be of benefit to students' career. Students should not view it only with myopic view point of placements alone it may be useful for their career in long run.

While Indian engineering education has served the nation well, there is broad recognition that it must change to meet new challenges. These changes should be consistent with national needs. Today, engineering colleges must not only provide their graduates with intellectual development and superb technical capabilities, but following industry's lead, colleges must educate their students to work as a part of the team, communicate well, and understand the economic, social, environmental and international needs in the context of their professional activities. These changes are vital to the nation's industrial strength and to the ability of engineers to serve as technology and policy decision makers.

Most importantly, engineering education programs must attract an ethnic and social diversity of students that better reflects the diversity of India and takes full advantage of the nation's talents. Not only does the engineering profession require a spectrum of skills and backgrounds, but also it should preserve its historical role as a profession of upward mobility.

In response to these needs,

engineering colleges throughout the country need to experiment with new approaches to curriculum, teaching modes, and developing innovative ways to prepare students for industry. Obviously this experiment is not possible without active support of students and parents so students need to understand what is engineering education and how it has to be pursued.

--M.L. Bhargava

Head of Dept., Training and Placement

JACK OF ALL TRADES BECOMES THE MASTER

The new scenario of Indian IT industry is giving us an interesting insight of the new breed of the manpower in the IT sector.

Today, IT sector has been sharply categorised between two sections

(a) specialists (b) versatilists

Experts comment on this situation as :-

"With an exceptional sense of understanding, business around technology, these guys are here to stay". India today, is looking at it as an approaching opportunity to build up a new breed of business savvy technologists.

Some of the forces that are ushering this change are :-

(a) The accessibility of global organisations to world labour.

(b) Provision of a wider pool of talent to exploit.

(c) Cut throat competition.

(d) Automation too is another factor.

India has always had an ingrained versatility, where by examples of pure its focus on companies diversifying into various business verticals, are plenty. The perspective here is, finally the need for this versatility is being recognised globally, throwing up an opportunity for the country to develop a new breed of workers while still not letting the specialists breed shrink.

Indian Industry will not suffer a talent crunch because, while the low end jobs get automated, India's software industry would mature and a lot of high end jobs would move to India.

With these facts one more important conclusion arise that the technical requirements are not dripping, its just that management skills are added to it.

By addition of management skills, we simply mean skills to manage with market.

Are efforts to build up the versatile manpower package are already in the offing? With Indian IT services moving up the value chain, the candidates are required to provide not just technical support, but a whole business solution. This versatile capability would also bring about wider responsibility and better pay hikes.

In the longer run, these factors would lead to pays being rationalised global competition and sealing up of India on the cost index and larger availability of versatilists.

--Prag Tyagi

IV Sem. (EE)

THE BETTER WAYS TO DISAGREE

Quite often disagreement can be unpleasant but for the sake of truth and to probe any issue fully and objectively, disagreement is imperative. Below are given few better ways to disagree :

- Never disagree rudely or aggressively. It is suggested that when you have no option but to disagree, do so politely and gently.

- Disagree to point out errors of logic or to reveal that a conclusion does not necessarily flow from what had gone by.

- Indicate if use of emotion, prejudices and stereotype has taken place.

- Sweeping consideration calls for disagreement.

- Likewise conclusions based on extreme extrapolation into future, demands disagreement.

- It is advisable to make a distinction between different opinion and disagreeing with an opinion.

- It is important to challenge certainty and to suggest probability instead.

--Prof. R.S. Mehta

M.B.A.

Miscellaneous

a rendezvous with heterogeneous

NEUTRON STARS

More massive stars tend to burn hotter and faster. Once all the nuclear fuel has been exhausted, stars quickly collapse, shedding much of this mass in dramatic explosions called supernoval. The most recent event of this kind was observed in 1987 when a star weighing equivalent to 20 suns blew up in a neighboring galaxy 160,000 light years away. If after such an explosion, the remaining material is greater than 1.4 solar masses, it will contract into an unimaginable dense core made solely of neutrons. Neutron stars are so dense a teaspoonful would weigh 100 million tons! Eventually astronomers may discover the telltale signs of a neutron star exactly where the old. star met its doom, though as yet none has been detected.

As heavy as neutron stars are, if they're less than 2 solar masses, they too can only contract so far and no further. That's because as they are crushed, the neutrons also resist the inward pull of gravity, just as a white dwarf's electrons do. However, if after a star collapse, the remaining core exceeds approximately 2 solar masses. The outcome is thought to be very different depends on the nuclear physics going on within the core; a topic of much debate within the physics community.

--Pooja Sharma

Lecturer, EC Deptt.

ARE WE YET INDEPENDENT?

Are we yet independent ? "This question has been hovering in my mind for past few days. After years of independence of India, though we have developed technically but our thinking has been stagnant. We are still hostage of poor mentality and low thinking and lack in feeling of love for our nation.

The people feel proud in calling themselves developed but some where deep in mind they have their rotten thinking. They feel they are civilized new generation simply by imitating the West. They have forgotten the roots of which they are the fruits. India is India only for Cricket matches and Olympics. The true feeling for India has been lost some where. The India which Gandhi and Jawahar thought of, can now not even be imagined. We have stooped down to such a level of idiocy that India's catastrophe is imminent. The love for our country can be seen on Republic Day and Independence Day whose value has just been reduced to a national Holiday meant for picnics and enjoyment. We can better say feeling of nationalism and love for India is dead.

We may have become independent but we are still in chains, bounded by our thinking, bounded by our ideology, bounded by new development and new advancements. It is on us to be proud of a nation who will lead the world in few years. It is on us to make our mother proud that we are her citizens. It is indeed on us to break the bonds, to break the chains and set ourselves free. As said in Atharva Veda-

"The wind blows where it will and you hear the sound of it, but you do not know whence it comes or whither it goes; so it is with everyone who is born of the spirit."

Open yourself, create free space; release the bound one from his bonds, like a newborn freed from the womb, be free to move on every path.

FRIENDSHIP

You have many things in your life. Some are small some are big, some are useless but some are priceless and I am going to discuss a very small but highly significant word in our lives. It is a relation but not family. It is precious but not diamond. It binds something but is not fevicol. Can you guess it? It is FRIENDSHIP. Isn't this a beautiful word. Yes it indeed is. It is a word having deepest meaning. It is a word which can confine all kinds of relations in itself.

It is a relation bright like sun but still has the calmness of moon. It is a relation vibrant like sea but with the sweetness of water. It has a taste of salt but is little choclaty. It has masti and laughter. It has tears. It means you. It means me. No matter how big you are, no matter how

small; you need a friend to share your dreams, share your sorrows and share your happiness too.

So next time if you see a friend, don't forget to flash your brightest smile and hug him. Treasure your treasure for life can.

--Aditi Tiwari

IV Sem. (IT)

MASTERMINDS BECOMING DISASTER MINDS

In these days of stress and strain, it is criminal to burden students with the pressure of numerous exams. As it is, the students are suffering from peer pressure to perform at any level - be it academics, sports or extra-curricular - so much so that it has taken away happy hours of recreation and relaxation from them. Add to it, commuting on congested roads, rushing to meet deadlines of school, extra classes and tuitions lead to falling appetites and sickening constitutions which take a heavy toll of their mental and physical abilities.

The educational system as it exists today is heavily geared against the all round development of a young citizen and one would endorse the view that "Admissions to the higher disciplines of study should be done on the basis of qualifying exams rather than a fresh set of entrance exams."

If we look at an average day in the life of a twelfth standard student of an average school who is planning to take up a professional

or technical course at a higher level, we find he or she gets up at around five in the morning, has a hurried bath, a quick change over into a school dress, gobbles a small bite and rushes to attend a tuition class. At around seven a.m. the student pedals furiously to the school and there after for next seven hours is engaged in school activities of various kinds. Mind you, these school hours are not just restricted to academics but have to do with a host of activities like school fair, house and club affairs that take up time and effort.

After a laborious session at school, the student comes home at around 2.00 or 2.30 p.m. and has barely an hour to take lunch and change before it is once again a race to reach another tuition class at the house of some so called subject expert. With eyes drooping and spirits flagging, the student comes back home around sunset and after a small breather goes through a painful grind of study till late night. Finally, exhausted beyond repair the child retires to bed for a small dose of sleep to recharge his or her self for another day.

Constantly preparing for exams puts extra pressure on students and they become mentally tired and physically drained. Going through with the rigorous cycles of study, practice and exams make Jack as well Jill dull and drab in the absence of fun, games and laughter.

--Rajat Rathore

I B.E., (I.T.)

You know what you are, but not what you can become

Success is matter of what you think you are capable of. It is a matter of futuristic thinking and planning. It is a matter of right ATTITUDE or more correctly success is being PASSIONATE about what you do.

Let me tell you something. In his first year in the automobile business, this man went bankrupt and two years later his second company also failed but he did not give up. His third attempt, however, has done rather well. It was the right attitude that helped Henry Ford achieve global success.

There is a big difference between people who just work and people who work passionately. And this difference is the difference between success and failure.

There are people with skills, and with knowledge and with an urge to succeed but somehow the urge is not forceful enough, rather not PASSIONATE ENOUGH.

So try to develop that spark, that enthusiasm, and most importantly that passion, which will drive you on the wonderful path called "SUCCESS".

You see things
And say : WHY ?
But I dream of things
That never were,
and say : WHY NOT ?

— Bernard Shaw

Failure again is a strong word and a very important one for success. Always try to develop a positive attitude and the other face of coin as Thomas Edison did. After failing 9999 times, he said, "I learnt 9999 times how not to make an electric bulb". And at last he invented an electric bulb and laid the foundation of an organization (General Electric) in 1879, which even today stands tall.

Thus success is all about being passionate about two words "I CAN".

Repeat these words "I can make it, I shall make it and I will make it."

Life will change I guarantee you, because life changes the movement you take right and committed decision.

Lastly, I would like to say ...

Dare to dream bigger,

And do believe in your dreams.

--Giriraj Mohta

I B.E., Computer Science

INDIA TOMORROW ????

Indian society is today at the crossroads. The choice lies between

Destruction	And	Prosperity
......A highly competitive society in which individual tries to better his own prospects with no thought for the weaker members.	?	......A highly caring society in which each individual works within the community for the betterment of all, where even the weakest can make his contribution with dignity.
.... Where exploitation is rife.	?	.....Where each one gets his due.
.... Where power is used for personal profit.	?	....Where power is exercised in the service of the people.
....Where one section of the population fights frantically to grab more and still more, while the rest are left in extreme poverty.	?	.... Where each one uses what is necessary and luxury is secondary to one's neighbors needs.
.... Where rich natural resources are destroyed in the mad craze for more money.	?	.... Where rich natural resources are husbanded responsibly and held in the trust for future generations.
....Where people isolate themselves behind barriers, lest they be asked to part with what they have.	?	.... Where people identify with one another and share what they have.
.... Where there is distrust	?	.... Where trust abounds.
.... Where each group wants to carve the country up into separate states so they can feel safe with their own kind.	?	.... Where differences come together to create harmony, like the different instruments in an orchestra.
.... Where injustice, brutality, hatred, and despair result from a society based on selfishness.	?	.... Where justice, mercy, love, hope inspire all to work together for a prosperity which all can enjoy.

--Sanchit Grover

I BE (IT)

विविधा

जीवन स्त्रोत : सूर्य

सूर्य आदिम काल से ही जीवनदायनी शक्ति का स्त्रोत माना जाता रहा है। प्राचीन सभ्यतायें सूर्य को देवता के रूप में पूजती थी। भारत में भगवान सूर्य, जापान में अमेतेरेष्यु, ग्रीस में अपोलो और इटली में जुपीटर परम शक्तिशाली अलौकिक शक्तियां, सूर्य के ही विभिन्न नाम रहे हैं। जापान तो कहलाता ही उगते सूर्य का देश' है। अधिकांश विश्व में सूर्य की उपासना सर्वोच्च ईश्वर के रूप में की जाती है।

जैसे–जैसे मानव सभ्यता का विकास हुआ यह प्रमाणित हुआ कि सूर्य भी ब्रह्मांड में स्थित अरबों तारों की तरह से ही एक तारा है। परन्तु हमारी धरती के निकटतम होने के साथ ही ग्रहीय प्रणाली का केन्द्र, सूर्य, मनुष्य मात्र के लिये अत्यन्त लाभकारी रहा है तथा इससे प्राप्त ऊर्जा का यथेष्ठ भंडारण, इसे और महत्वपूर्ण बना सकता है।

सूर्य से प्राप्त होने वाली ऊर्जा हाइड्रोजन के नाभिकीय संयलन प्रक्रिया के दौरान हीलियम में बदलने की प्रक्रिया में बचे अतिरिक्त द्रव्यमान का रूपान्तरित रूप ($E = mc^2$) ही है। सूर्य में चालीस लाख टन हाइड्रोजन प्रति सेकंड ऊर्जा में परिवर्तित होती है अर्थात प्रति सेकंड 10^{18} किलोवाट ऊर्जा का उत्पादन होता है। जिसका केवल आधा अरबवां भाग ही धरती तक पहुंचता है। पृथ्वी पर प्राप्त यह ऊर्जा ही जीवन के संरक्षण का मुख्य माध्यम है जो जीवन की उत्पत्ति हेतु अनुकूल परिवेश का निर्माण करती है।

आज के परिवेश में सौर ऊर्जा की महत्ता का कुछ उन्नयन ही हुआ है। पौधों द्वारा अतीत में संचित की गयी सौर ऊर्जा, पृथ्वी के पृष्ठ पटल की उठा पटक के दौरान धरातल के नीचे दब गयी। कालांतर में यह जीवाश्म ईंधन, कोयला, तेल और गैस में रूपांतरित हो गयी। लगभग 60 करोड़ साल में बने यह ऊर्जा स्त्रोत इतनी तेजी से दोहित हुये हैं कि तेल के समस्त भंडार अगले 100-125 सालों में समाप्त हो जायेंगे। मानव मात्र के लिये यह चिंता का विषय है कि ऊर्जा का प्रयोग बढ़ता चला जा रहा है वहीं ऊर्जा की प्राप्यता कम से कमतर होती चली जा रही है। अतः हमें वैकल्पिक ऊर्जा स्त्रोतों – (1) जल ऊर्जा (2) नाभिकीय ऊर्जा (3) पवन ऊर्जा तथा (4) सौर ऊर्जा इत्यादी का विकास करना होगा।

अन्य सभी तरीके एक या अधिक कारणों से आर्थिक बाधाओं से ग्रसित हैं। वहीं सौर ऊर्जा मुफ्त में प्राप्त सर्वाधिक ऊर्जा होती है। अविकसित तथा अल्प विकसित देशों के लिए सौर शक्ति प्रौद्यौगिकी का विकास प्रमुख प्राथमिकता है।

चूंकि यह प्रयास सम्पूर्ण विश्व में अभी अपनी शैशवावस्था में ही है अतः भारत इस क्षेत्र में नेतृत्व प्रदान कर सकता है।

राष्ट्रीय भौतिकी प्रयोगशाला, नई दिल्ली द्वारा विकसित सौर कुकर, जल तापक (Water Heaters) व अन्य उपकरण व्यावसायिक गति प्राप्त कर रहे हैं। इन युक्तियों का प्रयोग निजी आवासों, होटलों, स्कूलों, हास्पिटल आदि में बढ़ता चला जा रहा है। विकसित देशों (यूरोप एवं अमेरिका के सर्द प्रदेशों) में तो सौर ऊर्जा से गर्म रहने वाले घरों का निर्माण भी शुरू हो गया है। सौर ऊर्जा को बैटरियों में संग्रहित कर उनका कारों में उपयोग भी एक अन्य उदाहरण है। पीने योग्य जल के उत्पादन की सौर आसवन विधि, एक दूसरी प्रमुख समस्या (पीने योग्य जल की उपलब्धता) के समाधान में, सौर उर्जा के प्रभावी योगदान का महत्त्व स्थापित करती है।

इस प्रकार ऊर्जा के वैकल्पिक स्रोतों खासकर – सौर ऊर्जा के भंडारण व उपयोग के माध्यमों के विकास की अत्यधिक आवश्यकता है। समय का चक्र सूर्य को मानव सभ्यता के केन्द्रीय स्थल पर और ज्यादा महत्व के साथ स्थापित करने की ओर अग्रसर है।

–योगेशचन्द्र शर्मा

वरिष्ठ प्रवक्ता, भौतिकी

भूल न जाना

भूल न जाना उस सपने को
जिसको तुने कभी संजोया था

भूल न जाना उस मंजिल को
जिसकी राह में तू यहाँ आया था

भूल न जाना माँ की उन आँखों को
जिसने तेरे लिए सुनहरा सपना संजोया हुआ था।

भूल न जाना पिता की उस कुरबानी को
जिसने तेरे लिए अपना तन मन धन न्यौछावर कर डाला है और तेरे लिए कल का सुनहरा भविष्य निहारा है।

भूल न जाना गुरु के उन आदर्शों को
जिसके बलबुते पर तू इतना आगे बढ़ पाया है।

भूल न जाना साथी की उस पारी को
जिसने संकट में तेरा साथ निभाया है।

भूल न जाना उन खेत खलियानों को
जिसमें रहकर तू इतना आगे बढ़ पाया है

–आशीष व्यास व मनीष मेहता

प्रथम वर्ष

भावनाएँ

अंतःकरण का प्रतिबिम्ब

नन्ही कली (बालिका शिक्षा)

कोई पेड़ लगाता है, कोई पानी देता है,
कोई धूप देता है, कोई उसे संवारता है।
कभी बादलों की छांव उमड़ती है,
कभी कोई प्यार से सराहता है।
पर, इस जंगल में उसे कैसे छिपाए,
भेड़ियों से हम कैसे बचाए।
कैसे मैं कहू कि तेरा हक है खिलना,
सजना और जमाने को सजाना।
जब इस जमाने में कोई उसके साथ नही,
कोई सहारा दे ऐसा हाथ नहीं।
ऐ दोस्तो जागो और नन्ही कली को खिलने दो,
थोड़ा प्यार मांगती है, थोड़ा प्यार पा लेने दो।
दो बूंद कोई उसके दुख में रो लेगा,
दो घड़ी खुशी की, तुम्हारे साथ मांगती है।
इतना तो सब कर सकते हैं यहां कि,
उसकी पढ़ाई का इंतजाम कर दे।
दे उसको वो सोच कि वो खिल कर एक बरगद बने,
जिसकी छांव में कभी और एक नन्ही कली खिले।

—मीनाक्षी जैन
व्याख्याता, इलैक्ट्रीकल

संघर्ष और खुशी

जिंदगी में अगर खुशी चाहिये
तो संघर्ष तुझे करना पडेगा
रब की यही मर्जी है बंदे
तुझे उसे पूरा करना पडेगा।

वो रास्ते तो तुझे मिल ही जायेंगे।
अगर तू मंजिल ढूँढ़ लेगा।
वो सब सपने पूरे हो ही जायेंगे।
अगर तू उन्हें पूरा करेगा।

मुश्किलों को पार कर
लोग चांद छू चुके है
अगर तू ठान ले तो
सूरज भी छू सकेगा

तो उठ और चल
न हार अपनी जिंदगीं से
याद रख संघर्ष के उस मोड पर

खुशियों की वो मंजिल है।

तू तो जीत ही जाएगा।
बस एक बार खेलना शुरू कर
सब कुछ तेरा ही हो जाएगा
बस एक बार अवेरना शुरू कर

तू अकेला है तो क्या हुआ।
तू अपनी मंजिल तक तो पहुँच
बस तेरा ही नाम रह जाएगा
जब इंजीनियर तू बन जाएगा।

—सुमन चौधरी
प्रथम बी.ई. (कम्प्यूटर साइंस)

माँ

"माँ वो शब्द है जिसमें
पूरी दुनिया समा सकती है,
ना सिर्फ मुश्किल बल्कि नामुमकिन
इसकी अभिव्यक्ति है,
माँ एक अहसास है
जो सबसे प्यारा है,
इसी शब्द में नीहित
प्रकृति का स्नेह सारा है,
माँ एक स्पर्श है
जिसकी छुअन गुलाब सी कोमल है,
माँ ईश्वर प्रदत्त वो अनुपम कृति है
जो सबसे अनमोल है,
माँ वो शीतल छाया है, जो
किसी घने तरूवर से भी अधिक सुखदायी है,
माँ तो बस करूणा, ममता, दया का रूप बन
धरती पर आई है,
है प्रार्थना ईश्वर से हमारी
सदा इसका सर पे हाथ रहे,
माँ ही हमारा जीवन है, अब
इससे अधिक हम क्या कहें,
ना रूठे ये कभी,
क्योंकि इसके बिना हमारी ये दुनिया
वीरान हो सकती है
सच माँ वो शब्द है जिसमें
पूरी दुनिया समा सकती है।"

—पूजा शर्मा
व्याख्याता, इलैक्ट्रॉनिक्स इंजी.

चिंतन मनन

मंथन विविध विचारों का

विद्यार्थी जीवन व परिश्रम

अजगर करे न चाकरी, पंछी करे न काम।
दास मलूका कह गये, सबके दाता राम।।

आलस्य सभी अवगुणों की जड़ है। आलसी व्यक्ति महापुरुषों के नाम के वचनों का सहारा लेकर कर्त्तव्य-कर्म से बचते रहते है। किसी भी कार्य को पूर्ण करने के लिए केवल चिंतन व मनोरथ नहीं वरन् उद्यम की भी अत्यन्त आवश्यकता है। विद्यार्थी जीवन में परिश्रम का महत्व सबसे अधिक है। आज के इस अति-आधुनिक युग में मोबाईल, सी.डी., डि.वी.डी. कम्प्यूटर व अन्य ऐसे साधन है जिनका एक पक्ष ऐसा भी है जो विद्यार्थी जीवन को विलासिता, भोगवृत्ति व आलस्य की ओर धकेलता है। ऐसे अकर्मण्य व आलसी लोग हाथ पर हाथ धरे बैठते हैं और ईश्वर की कृपा से सिद्धि चाहते हैं।

जहाँ ध्येय है वहाँ कर्म भी है। हमारा इतिहास साक्षी है कि कर्म-पथ पर चलने वाले व्यक्तियों ने ही इतिहास का निर्माण किया है। विनोबा भावे ने सही कहा है– "कर्म ही मनुष्य के जीवन में सफलता की कुँजी के रूप में राष्ट्रपिता महात्मा गांधी के ये वचन, "दृढ़ संकल्प एक गढ़ के समान है जो कि भयंकर प्रलोभनों से हमें बचाता है और डाँवाडोल होने से हमारी रक्षा करता है", छात्रों को कठंस्थ कर लेना चाहिए।

विद्यार्थी जीवन में कई बार छात्र ऐसे दोराहें पर खड़े हो जाते है जहाँ पर कर्म करने की अपेक्षा उन्हें भाग्य के भरोसे बैठना ज्यादा सरल लगता है। इस स्थिति में यह ध्यान रखना चाहिए कि भाग्यवादी लोगों को भले ही सुख सफलता अनायास ही भाग्य के सहारे मिल जाती है परन्तु कर्म करने पर सफलता निश्चित ही मिलती है व इस आधार पर मिलने वाली सफलता स्थायी होती है। जब महान वैज्ञानिक एडीसन से उसकी सफलता का रहस्य जानना चाहा तो उसने हँस कर उत्तर दिया "प्रतिभा क्या है एक औंस बुद्धि और एक टन परिश्रम"।

परिश्रमी तथा लग्नशील व्यक्ति ही जीवन में सफल होते हैं तथा सफलता उनके कदम चूमती है। विद्यार्थी-जीवन भावी जीवन की भूमिका है। दिनकर ने अपनी पंक्तियों द्वारा परिश्रमशीलता और दृढ़ता का संदेश छात्रों को इस प्रकार दिया है:

"वैराग्य छोड़ बाहों की विभा संभालो
चट्टानों की छाती से तुम दूध निकालो
है रुकी जहाँ भी धार शिलाएँ तोड़ो
चंद्रमाओं की पीयूस को पकड़ ध्येय निचोड़ो।"

–नूपुर श्रीवास्तव
वरिष्ठ व्याख्याता, गणित विभाग

पानी रहे बहता

आदमी के आदमी से छल नहीं होंगे,
जो अंधेरे आज सच है कल वहीं होंगे,
सीखना होगा हमें ही ठीक से चलना,
जिन्दगी के रास्ते कभी समतल नहीं होंगे,
समझ का विस्तार ही खुलझाएगा इनको,
अपने सवाल दूसरों से हल नहीं होंगे,
जलधार प्राणवान हो जलधार की तरह,
पानी रहे बहता तो ये दलदल नही होंगे,
खोज लेंगे रोशनी का पथ अंधेरों में,
सत्य के राही कभी पागल नहीं होंगे,
ये धरा अपनी रहेगी, ये गगन अपना,
आस के पंछी कभी ओझल नहीं होंगे।

–विकम सिंह
द्वितीय वर्ष, बी.ई.

दृष्टिकोण

आधुनिकता की इस जिन्दगी में प्यार करने वालें बहुत कम है।
गम यदि सौ है, तो खुशी बहुत कम है।
प्यार की खातिर भाई भाईयों पर मिटने वाले बहुम कम है।
दिखावा झूठ, फरेब, बढ़ता ही जा रहा है इस जिन्दगी में
वो कहते है कि पहले लोग अपने देश अपनी आज़ादी की खातिर मर मिट जाया करते थे
लेकिन आज अपनी आज़ादी के लिए अपने आप को बलिदान कर देने वाले बहुम कम है।
वो कहते है
प्यार में हीर, रांझा, भगवान राम, भरत जी ने
एक मिसाल कायम कर दी
लेकिन आज ऐसी मिसाल कायम कर देने वाले बहुत कम है।
60 वर्ष का एक बूढ़ा आदमी यदि एक बस में धक्के खाता है,
तो उसे देखने वाले बहुत लेकिन सीट पर बिठाने वाले बहुत कम है।
वो कहते है पहले नेता अपने देश की आजादी के लिए
खुद को देश के लिए सौंप दिया करते थे।
लेकिन आज भ्रष्टाचार, अनाचार बढ़ता ही जा रहा है।
आज देश की उन्नति के लिए अपने घरबार को छोड़ने वाले नेता बहुम कम है।
वो कहते है आज के जमाने में राजा लोग नहीं रहे।
जो अमीर है वो अपने को राजा समझता है।
पर गौर से देखो उस अमीर राजा के दिल में भी सुख चैन बहुम कम है।
मैं चाहता तो इन शब्दों को अंग्रेजी में लिख सकता हूँ।
लेकिन जिस दृष्टिकोण से मैं इन्हें लिख रहा हूँ उस दृष्टिकोण से
इसे अंग्रेजी मे समझने वाले बहुत कम है।

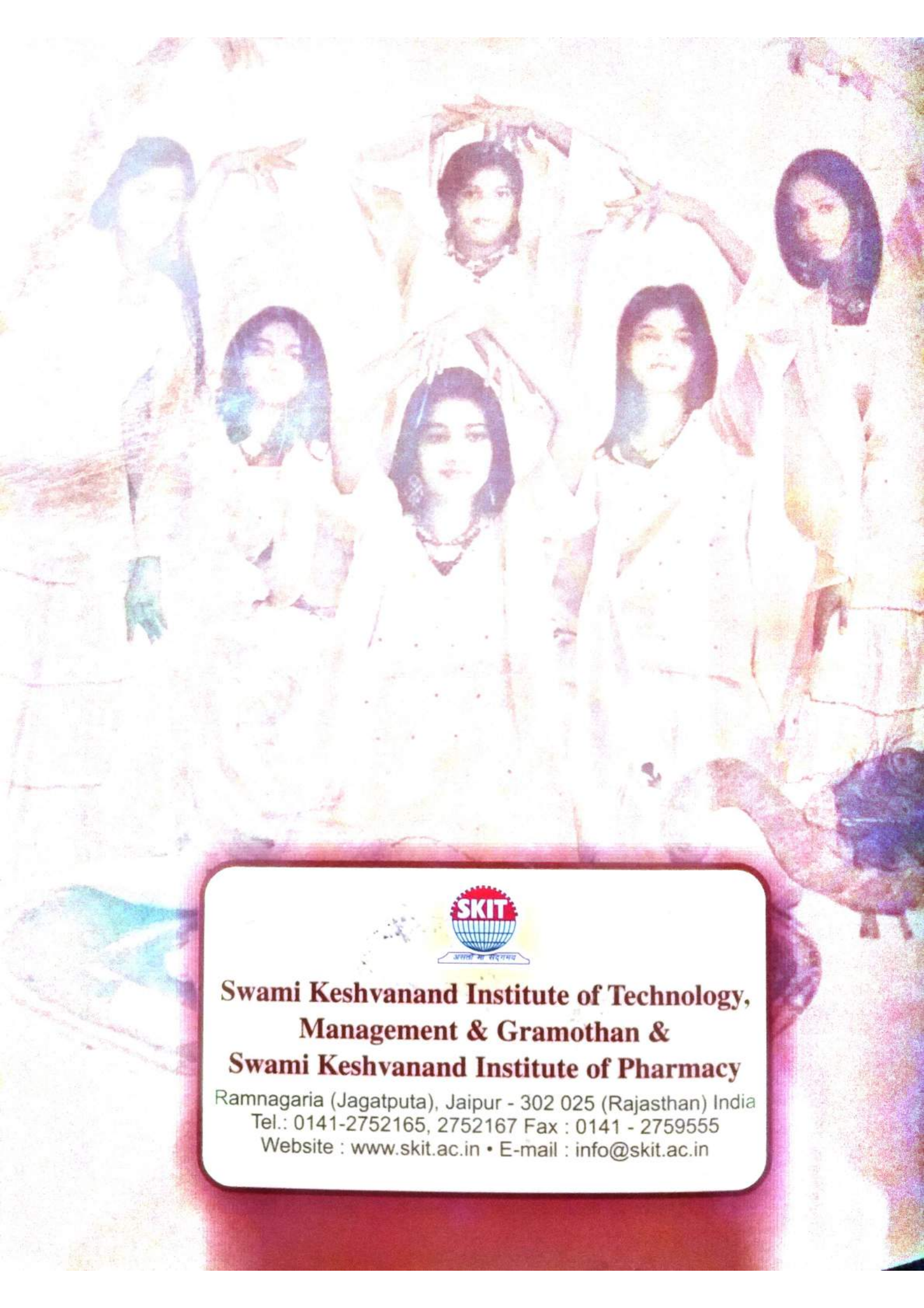**–तोषेद्र सिंह**
प्रथम वर्ष, बी.ई.

The Trend Setters

Editorial Board