

  
Kathan  
ज्ञानम् यजामहे ।



Rotary 

 **UPL**

*24th Edition*

# STORY SPECIAL

Tell the stories



**SHROFF S.R. ROTARY INSTITUTE OF  
CHEMICAL TECHNOLOGY**

April 2018

## **KATHAN – EDITORIAL BOARD**

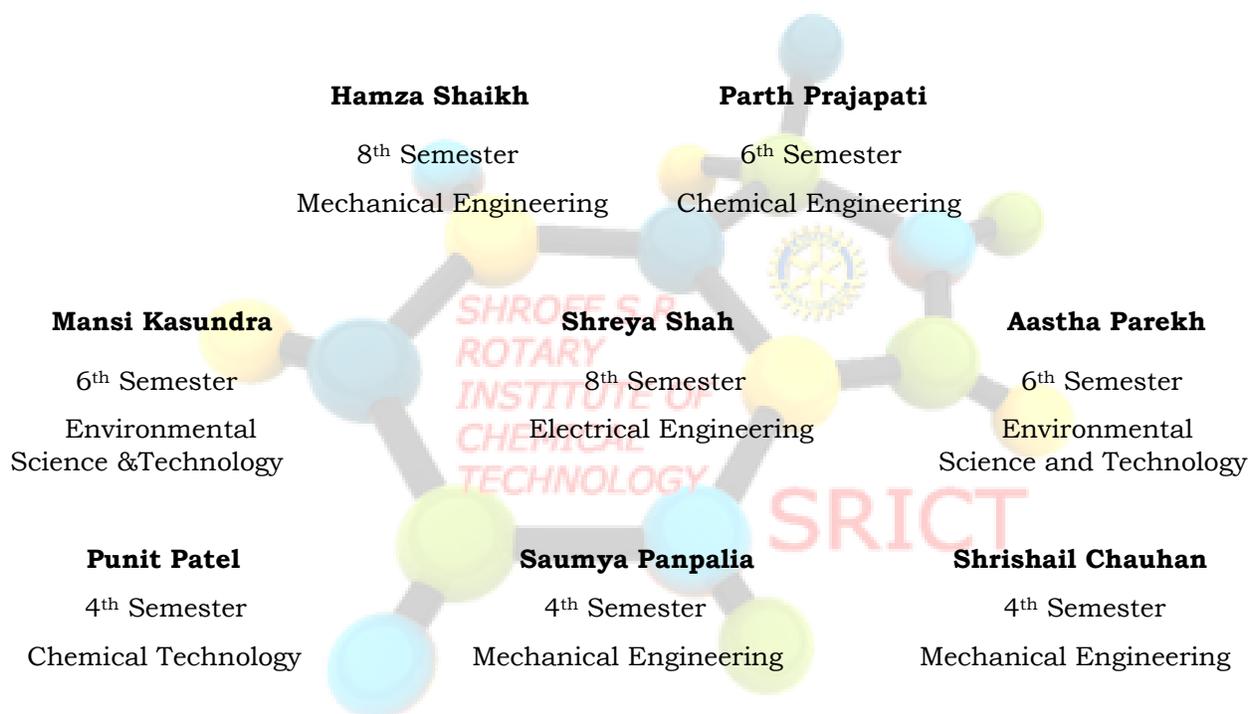
DR. SNEHAL LOKHANDWALA- **PRINCIPAL (I/C)**

DR. PRABIR CHANDRA PADHY

MR. AMIT GALPHADE

MS. ANJALI NAIR

**Especially thankful for the enthusiastic and dedicated efforts of:-**



### **ANKLESHWAR ROTARY EDUCATION SOCIETY**

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## EDITORIAL BOARD MESSAGE

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It is with great pleasure that we put 24<sup>th</sup> edition of Kathan in your hands. As you all know, KATHAN is a platform that exhibits the literary, scientific and innovative art, articles as well as brain twisting facts by faculty members and students that is published at every quarter of the year. “KATHAN” represents the hard work and dedication of students and contributions of the faculty members.

Before talking further about this story special 24th issue of KATHAN, we would like to share a short story.

A group of frogs were traveling through the forest when two of them fell into a deep pit. When the other frogs saw how deep the pit was, they told the two frogs that there was no hope left for them.

However, the two frogs ignored their comrades and proceeded to try to jump out of the pit. However, despite their efforts, the group of frogs at the top of the pit were still saying that they should just give up as they'd never make it out.

Eventually, one of the frogs took heed of what the others were saying and he gave up, jumping even deeper to his death. The other frog continued to jump as hard as he could. Once again, the group of frogs yelled at him to stop the pain and to just die.

He ignored them, and jumped even harder and finally made it out. When he got out, the other frogs said, “Did you not hear us?”

His mother, relieved and filled with tears, came forward and explained others that he was deaf, and that he must have thought that they were actually encouraging him the entire time.

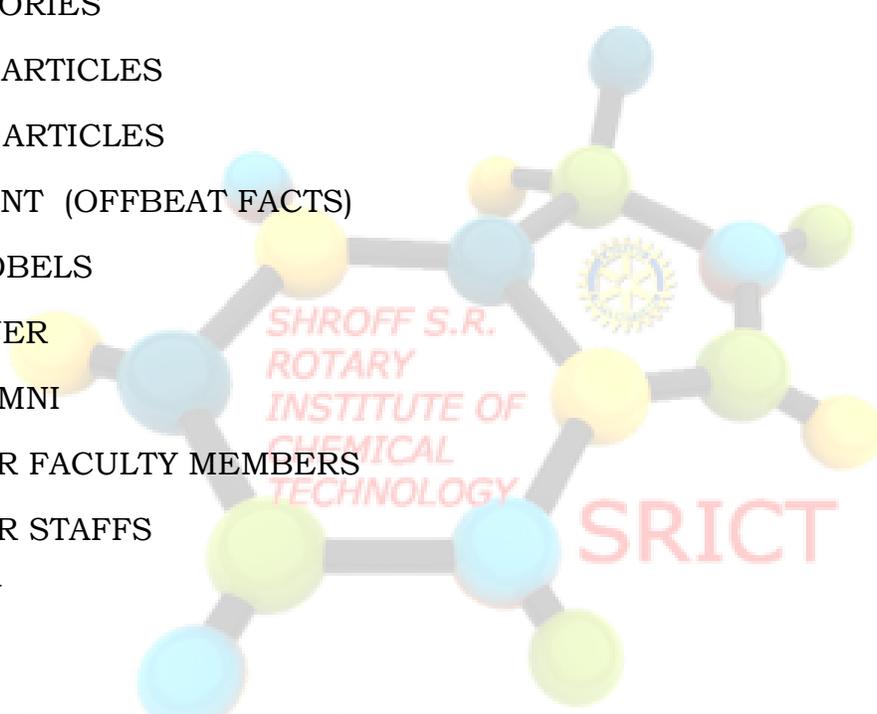
What do we learn from this? We learn that your words can have a huge effect on the lives of others. Therefore, you should think about what you're going to say before it comes out of your mouth – it might just be the difference between life and death.

Coming back to Kathan, we hope you enjoyed our New Year Special issue of last time. This issue is short story special. Along with stories, there are as usual the highlights of the SRICT news and events.

Have a look at all the sections. You will definitely love the magazine. We look forward for your valuable feedback.

Happy reading

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## FROM PRINCIPAL'S DESK

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DR. SNEHAL LOKHANDWALA

Principal (I/C)

*“I’m not telling you it’s going to be easy, I’m telling you it’s going to be worth it”*

Firstly, I am a supporter of teachers. Years ago there were the license plates in Indiana that declared “Students First.” I wanted one that said “Teachers First,” not because I think less of students, but because I believe that if we have great teachers in our classrooms, then we do not have to worry as much about the students. Many students come here to us with their backs against the wall-home life is abysmal; parents have given up on their children and expect the institute to fix the problems; students have experienced so much failure in life that they now refuse to try. There is little we can do as educators to change these factors. What we can control is what happens at institute and the classrooms. We can call parents. We can ask parents to come in to meet with us. We can talk to the students. We can set expectations and help students meet those expectations while we hold them accountable. We can be the calm voice in the crisis. We can speak with reason when emotions are high. We can do so much. Therefore, great teachers are the most important ingredient to the success of our institute.

Secondly, the outrage over No Student Left Behind has faded and we are now beginning to understand that every kid needs a high school diploma. Every student will need some form of post-graduation to compete in a 21st century economy. Our goal must be a 100% graduation rate and we must do everything within our power to achieve that goal. Still, student's home lives are unsupportive and destructive. And you can lead a horse to water, but you can't make him drink. But we cannot afford to focus on the things we cannot change. We must concentrate on those things we can change and the places where we can make a difference—the classrooms and the halls of our school. We can set high standards and high expectations, and we can find ways to hold our students accountable to those standards and expectations, while supporting students as they learn. The excuses we find for allowing kids to fail do not excuse us of our duty. We must find a way to help every student to reach his highest potential with the compassion and dignity that every human deserves.

Finally, I believe that we, as educators, are models of integrity. We are held to a higher standard by our communities, by our students, and by our colleagues. As actions speak louder than words, we have to ask ourselves, "What are my actions communicating to those around me?" If I take every sick day and personal day to which I am fully entitled, what does that communicate to my students about the importance of attendance? If I refuse to enforce the rules of the institute in my classroom and in the hallways outside my classroom, what does that say of my attitude toward the rules of the school? If I close my door to the concerns of my students—or in my case, of my teachers—what does that say regarding how much I value these people and their concerns? If I refuse to contact parents when a student is failing, what am I saying about the importance of the partnership that exists between the parents and the college? I strive to be a model of integrity and ask the same of you. When we falter, we must learn to begin again; for there are truly no failures, only those who give up too soon. Dear Students don't forget "*The Expert in anything was once a beginner*"

"We share because we care"

## SRICT NEWS...

### श्रुति एवं प्रवृत्ति

[DEPARTMENT OF CHEMICAL ENGINEERING]

#### ONE DAY REFRESHER COURSE ON "DISTILLATION AND FLUID FLOW OPERATION"

Department of Chemical Engineering of SRICT had organised one day refresher course on "Distillation and fluid flow operation" on 17th March. 68 students and faculty members from Valia polytechnic college participated in the course. It was successfully coordinated and organised by team Chemical.



#### TRAINING PROGRAM ON "A FREE & OPEN SOURCE CHEMICAL PROCESS SIMULATOR: DWSIM"

Department of Chemical Engineering organised a Two days workshop for final and pre-final year students of

different colleges on the topic "A Free & Open Source Chemical Process Simulator: DWSIM". The workshop was for 9-10th Feb 2018. Students of different colleges like DDU, SVMIT, LD College of engineering, GEC-Bhuj, GEC- Bharuch, GEC- Valsad, Pacific school of engineering, & SRICT participated.



#### PARTICIPATION IN POSTER PRESENTATION

Shipra Gupta, Abhishek Sharma and Arth Limbachiya students of Sem 8, Chemical Engineering, participated in poster presentation at Students outreach program 2018 and International conference and exhibition on 23-24 January, Ahmedabad (Gujarat). They got cash award of RS 5000 as consolation prize.

### LECTURE BY INDUSTRIAL RESOURCE PERSON

Mr. Nikhil Kulkarni, owner of Analpa Industries, is Industrial Resource Person for Mechanical Engineering Department. He is actively participating in the development of students of SRICT and over past few years has contributed immensely.

He conducted the class on 24<sup>th</sup> January, 2018 for 6<sup>th</sup> semester Mechanical students. He covered the topic on Practical aspects of “Manufacturing and Material Science in industry”.

Students got taste of what is actually happening in the industry and how they can proceed to be industry ready by the end of their graduation.



### PARENTS-TEACHER MEETING (SAMPARKABHIYAN) FOR MED STUDENTS

Parents-Teacher meeting, "Sampark Abhiyan" for the 4<sup>th</sup>, 6<sup>th</sup>& 8<sup>th</sup> Semester Mechanical Engineering Students held on 26<sup>th</sup> March, 2018 at SRICT Class Room No. 12 by Department of Mechanical Engineering.

Mr. Samir Jariwala (Head of MED) interacted with parents about **Faculties, Laboratory Facilities, Attendance Criteria, Previous & Current Semester Attendance & Results, T & P Activity, IV/EL, 100 Activity Points, IE Student Chapter, 5S, VLNC, PG Course and Role of Parents in NBA.**

Commitment was taken from the parents to motivate their wards to enhance their academic performance. Feedback given by parents was found good about SRICT and MED. Total 38 parents were present. Refreshment was also arranged after the completion of meeting.

### “ONE DAY WORKSHOP ON ADVANCED MODELING IN SOLIDWORKS UNDER THE BANNER OF INSTITUTION OF ENGINEERS (INDIA)”

The Department of Mechanical Engineering has organized one day workshop on modeling in Solidworks under the banner of Institution of

Engineers (India) Mechanical Engineering student chapter on Tuesday, 30<sup>th</sup> January, 2018 with an aim at creating awareness of SolidWorks Essential, Part Modeling, advanced assembly and Drawing Views.

Student members of IEI of the Mechanical Engineering department attended the workshop. The students have shown their interest for modeling of different components through this workshop & they realized that this kind of workshop can be fruitful to them in project related work and OEP (Open Ended Problem).

The whole programme was coordinated by Assistant professor Mr. Devang S Patel (Coordinator of IEI student chapter) accompanied with all faculties and supporting staffs of Mechanical engineering Department.

“ONE DAY WORKSHOP ON FUNDAMENTAL CONCEPTS OF REFRIGERATION SYSTEMS”



Mechanical Engineering Department organized one day workshop on

“Fundamental Concepts of Refrigeration Systems” for diploma students under the coordination of Mr. Ankursinh Solanki on 2<sup>nd</sup> & 3<sup>rd</sup> February, 2018 at SRICT campus. Total 104 Diploma students of various institutes of Surat district attended the workshop and gained the knowledge of fundamental concepts of refrigeration process and working as well as analysis of different types of refrigeration systems. Theoretical and hands on practice sessions on various test rigs of VCR and VAR system were conducted. Students have given positive feedback regarding workshop and shown interest to attend other workshops which are going to be organized by Mechanical Engineering Department in future. At the end of workshop, certificates of participation were given to the all the participants.

“ONE DAY WORKSHOP ON BASICS OF HYDRAULIC MACHINES”





Mechanical Engineering Department organized one day workshop on “Basics of Hydraulic Machines” for diploma students under the coordination of Mr. Shivang Ahir on 2<sup>nd</sup> & 3<sup>rd</sup> February, 2018 at SRICT campus. Total 101 Diploma students of various institutes of Surat district attended the workshop and gained the knowledge of various hydraulic machines. Theoretical and hands on practice sessions of various Hydraulic Turbines and Hydraulic Pumps were conducted. Students have given positive feedback regarding workshop and shown interest to attend the other workshops which are going to be organized by Mechanical Engineering Department in future. At the end of the workshop, certificates of participation were given to the all the participants.

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## “RAKTAKUNDALI” FEBRUARY 2018

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Blood Donation is an important and foremost sense of duty of every human being which saves the life of many humans who needs it in urgent situation. On the 17<sup>th</sup> February, 2017, “RAKTA-KUNDALI 2018” was successfully organized by Department of Mechanical Engineering in collaboration with Rotaract Club of SRICT Ankleshwar at SRICT campus. The camp was inaugurated by Secretary, ARES, Mr. Angiras Shukla. Rtn. MeeraPanjwani also visited the camp and motivated the students to take keen interest in social activities like blood donation. About **67** students/staff have volunteered in this camp for donating blood. The team who supports us for Blood donation camp was Indian Red Cross Society, Bharuch.





“RAKTAKUNDALI” APRIL 2018

FALICITATION (1<sup>ST</sup> SEMESTER STUDENTS)

“Blood donation is the real act of humanity”

Blood donation is a most important social service to the humankind. As being a human, we must donate blood to save the lives of many humans who need it in urgent situation. On the 7<sup>th</sup> April, 2018, “RAKTA-KUNDALI 2018” was successfully organized by Department of Mechanical Engineering in collaboration with Rotaract Club of SRICT Ankleshwar at SRICT campus. About **83** students/staff had volunteered in this camp for donating blood. The team who supports us for Blood donation camp was Indian Red Cross Society, Bharuch.

SRICT has always believed in commending the students to inspire them to scale greater heights. A felicitation ceremony was held on 6<sup>th</sup> April 2018 at SRICT, to honour the gleaming stars of semester I, who showcased outstanding performance in GTU winter 2017. The Vice Chairman Rtn. Ashok Panjwani, Secretary, ARES Mr. Angiras Shukla, Treasurer, ARES Mr. Kishor Surti, CEO BEIL, Mr. B D Dalwadi, Technica Committee member, Dr. V. V. Mahajani, ICT, Mumbai, Principal, SRICT Dr. Kalyana Sundarm graced the occasion and presented the cash prizes and certificate of excellence to the students for their meritorious performance. Total cash prize worth of Rs. 210000/- have been rewarded

to 30 students of 1<sup>st</sup> semester UG top scorer students by ARES management of SRICT. Head, Department of Mechanical Engg. Mr. Samir Jariwala proposed the vote of thanks. He stressed on the importance of hopes and aspirations and how they are the stepping stones on the path to success.

### 1<sup>st</sup> Semester Students:

9.5 to 10 SPI: 2 Students with Amount of **40000/-**

9 to 9.49 SPI: 6 Students with Amount of **60000/-**

8.5 to 8.99 SPI: 22 Students with Amount of **110000/-**



FALICITATION  
(3<sup>RD</sup> AND 5<sup>TH</sup> SEMESTER  
STUDENTS)



SRICT has always believed in commending the students to inspire them to scale greater heights. A felicitation ceremony was held on 28<sup>th</sup> March 2018 at SRICT, to honour the gleaming stars of semester III and V, who showcased outstanding performance in GTU winter 2017 examination and also the student of CE 5<sup>th</sup> Semester Yash Goel who score a perfect SPI 10 at University. The Vice Chairman, Rtn. Ashok Panjwani, Secretary, ARES Mr. Angiras Shukla, CEO BEIL, Mr. B D Dalwadi, Global Vice President, Environment & Sustainability, UPL Dr. Mritunjay Chaubey, Trustee ARES, Dr. P N Parmeshwaran, Principal, SRICT Dr. Kalyana Sundarm graced the occasion and presented the cash prizes and certificate of excellence to the students for their meritorious performance. Total cash prize worth of Rs. **594000/-** have been rewarded to 47 students of 5<sup>th</sup> sem and 33 students of 5<sup>th</sup> sem UG top scorer students by ARES management of SRICT and Gold Medal to Yash Goel sponsored by UPL. Head, Department of Mechanical Engg. Mr.

Samir Jariwala proposed the vote of thanks. He stressed on the importance of hopes and aspirations and how they are the stepping stones on the path to success.

**Gold Medalist: Mr. Yash Goel (4<sup>th</sup> Semester CE)**

**5<sup>th</sup> Sem Students:**

9.5 to 10 SPI: 4 Students with Amount of **80000/-**

9 to 9.49 SPI: 15 Students with Amount of **150000/-**

8.5 to 8.99 SPI: 28 Students with Amount of **140000/-**

**3<sup>rd</sup> Sem Students:**

9.5 to 10 SPI: 5 Students with Amount of **66000/-**

9 to 9.49 SPI: 10 Students with Amount of **86000/-**



8.5 to 8.99 SPI: 18 Students with Amount of **72000/-**

**FALICITATION (7<sup>TH</sup> SEMESTER STUDENTS)**

SRICT has always believed in commending the students to inspire them to scale greater heights. A felicitation ceremony was held on 16<sup>th</sup> February 2018 at SRICT, to honour the gleaming stars of semester VII and Post Graduate semester III, who showcased outstanding performance in GTU winter 2017 examination and also the student of EST Krishna Mani who score a perfect SPI 10 at University. The Chairperson, ARES, Mrs. Sandra Shroff, Vice Chairman Rtn. Ashok Panjwani, Secretary, ARES Mr. Angiras Shukla, Vice President UPL, Dr. Parmeshwaran, Principal, SRICT Dr. Kalyana Sundarm and Technical committee members of SRICT graced the occasion and presented the cash prizes and certificate of excellence to the students for their meritorious performance. Total cash prize worth of Rs. 7,51,000/- have been rewarded to 93 UG and 07 PG top scorer students by ARES management of SRICT and Gold Medal to Krishna Mani sponsored by UPL. Head, Department of Mechanical Engg. Mr. Samir Jariwala proposed the vote of thanks. He stressed on the importance of hopes and aspirations and how they

are the stepping stones on the path to success.

[DEPARTMENT OF ELECTRICAL ENGINEERING]

### TECHNICAL WORKSHOP SERIES - TECHWORKS - 18

The Department of Electrical Engineering of Shroff S R Rotary Institute of Chemical Technology (SRICT), Vataria, Ankleshwar and The Institution of Engineers (India) SRICT Students' Chapter (Electrical) had organized a one day state level workshop on **“Practical Realization of Power System Protection”** on 14<sup>th</sup> March 2018. Approximately 50 students & faculty members were participated in the workshop.

The main purpose of this workshop was to make students aware of Basic & Practical approach of Power System Protection and train them so that they can be ready for industrial practical exposure. The theoretical & Practical session were handled by Expert Faculties from Department of



Electrical Engineering. Positive response was received from delegates of various institutions.

This State Level Workshop was successfully well organized and coordinated by Department of Electrical Engineering of SRICT and The Institution of Engineers (India) SRICT Students' Chapter (Electrical) with the full support of SRICT management.



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## EXPERT LECTURES

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[DEPARTMENT OF MATHEMATICS,  
SCIENCE & HUMINITIES]

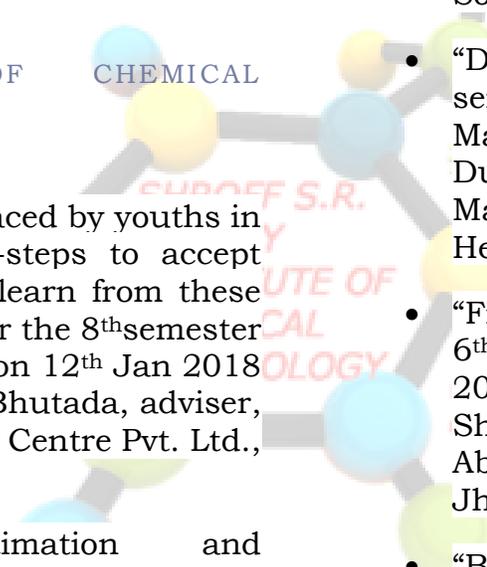
- “Safety in Industry” for the 2<sup>nd</sup> Semester CE students on 17<sup>th</sup> Feb 2018 by, Mr. Sanjay, UPL.
- “Safety in Industry” for the 2<sup>nd</sup> Semester EST students on 17<sup>th</sup> Feb 2018 by, Mr. Dharajiya, UPL.
- “Role of Mechanical Engineer in Chemical Industry” for the 2<sup>nd</sup> Semester CE students on 23<sup>th</sup> Feb 2018 by, Mr. Nikhil Kulkarni, Analpa.
- “Role of Mechanical Engineer in Chemical Industry” for the 2<sup>nd</sup> Semester EST students on 23<sup>rd</sup> Feb 2018 by, Mr. Nikhil Kulkarni, Analpa.
- “Corporate Communication” for the 2<sup>nd</sup> Semester CE students on 9<sup>th</sup> April 2018 by, Ms. Rinsu Varghese, Birla Copper
- “Corporate Communication” for the 2<sup>nd</sup> Semester EST students on 9<sup>th</sup> April 2018 by, Ms. Rinsu Varghese, Birla Copper.

[DEPARTMENT OF ELECTRICAL  
ENGINEERING]

- “Technical in solar roof top and Entrepreneurship In solar” for the 8<sup>th</sup> Semester EE students on 5<sup>th</sup> Jan 2018 by Mr. Vraj Shah, Director, RE-DEAL Solutions, Ahmedabad
- "Switch Gear Protection with Industrial Engineering" for the 8<sup>th</sup> Semester EE students on 9<sup>th</sup> Jan 2018 by Mr. K S Shah, Chief Manager (Electrical), GNFC Ltd., Bharuch
- “Operation & Protection of Induction Motor” for the 4<sup>th</sup> Semester EE students on 12<sup>th</sup> Feb 2018 by Mr. Krishnamurthy, Electrical Engineer Plant, EWAC Alloys Ltd., Ankleshwar.
- “New Beginning – An Industry Training” for 6<sup>th</sup> Semester EE students on 20<sup>th</sup> Jan 2018 by Mr. Yogesh Dave, Manager, Human Resource, Maldeep Catalyst Pvt Ltd, Ankleshwar.
- "Power Distribution System & Industrial Practices " for the 8<sup>th</sup>& 6<sup>th</sup> Semester EE students on 24<sup>th</sup> Feb 2018 by Prasanth Gottapu, Vice President-Electrical, Reliance Industries Ltd., Dahej Manufacturing Division, Dahej.

- "Power System Planning and Design" for the 8<sup>th</sup> Semester EE students on 26<sup>th</sup> Feb 2018 by Mr. S M Takalkar, Director, Takalkar Power Engineering Consultancy Pvt Ltd, Vadodara.
- "Basics of Electrical Machines and Improvement in their performance" for the 4<sup>th</sup> Semester EE students on 19<sup>th</sup> March 2018 by Mr. Virendra Prasad, Sr. Manager – Electrical, PI Industries Ltd., Panoli.
- "Drying" for the 6<sup>th</sup> semester CE Students on 18<sup>th</sup> Jan 2018 by Mr. Manoj Bhagwat, works manager, Yashasvi Rasayan Pvt. Ltd.
- "Motivation" for the 6<sup>th</sup> semester CE Students on 15<sup>th</sup> Feb 2018 by Dr. Parmeshwaran, Trusty, SRICT.
- "Industrial Mixing" for the 6<sup>th</sup> semester CE Students on 17<sup>th</sup> Feb 2018 by Mr. Amol Dhondge, Process Engineer, Solvey India Pvt. Ltd., Panoli

[DEPARTMENT OF CHEMICAL ENGINEERING]

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- "Challenges faced by youths in 21st century-steps to accept them and to learn from these challenges" for the 8<sup>th</sup> semester CE Students on 12<sup>th</sup> Jan 2018 by Dr. Sunil Bhutada, adviser, Europe Study Centre Pvt. Ltd., Surat.
  - "Cost Estimation and Entrepreneurship" for the 8<sup>th</sup> semester CE Students on 16<sup>th</sup> Feb 2018 by Mr. Jemish Viradia, CEO, Enclifestyle Pvt. Ltd., Surat.
  - "Process Engineering design" for the 8<sup>th</sup> semester CE Students on 16<sup>th</sup> March 2018 by Mr. Vasant Dinkar Mestry, Managing Director, Suvidya Institute of Technology.
  - "Drying Technology" for the 6<sup>th</sup> semester CE Students on 17<sup>th</sup> March 2018 by Mr. DurgaPrasada Rao, Maintenance Manager, Abbott Healthcare Ltd., Jhagadia.
  - "Filtration Technology" for the 6<sup>th</sup> semester CE Students on 20<sup>th</sup> March 2018 by Mr. Nilesh Shah, Manufacturing Head, Abbott Healthcare Ltd., Jhagadia.
  - "Batch distillation : Theory and practice" for the 6<sup>th</sup> semester CE Students on 6<sup>th</sup> April 2018 by Dr. V. V. Mahajani, Professor, ICT Mumbai.
  - "Health & Fitness" for the 4<sup>th</sup> semester CE Students on 16<sup>th</sup> Jan 2018 by Dr. Sanjay Shah, Professor, SVNIT.
  - "Chemical process industries" for the 4<sup>th</sup> semester CE Students on 22<sup>nd</sup> March 2018

by Mr. Tapan Doshi, Engineer, OPAL.

- “Heat Transfer” for the 4<sup>th</sup> semester CE Students on 7<sup>th</sup> April 2018 by Mr. Jaiprakash Tiwari, Process engineer, UPL Ltd.

[DEPARTMENT OF MECHANICAL ENGINEERING]

- “Selection & operation of valves” for the 8<sup>th</sup> semester ME Students on 6<sup>th</sup> Feb 2018 by Mr. Deepak Mirchandani, Marketing Manager, Technik Valves PVT Ltd.
- “Industrial Safety” for the 8<sup>th</sup> semester ME Students on 14<sup>th</sup> March 2018 by Mr. Jawahar Varelani, Head-HR, Riddhi Pharma, Ankleshwar.
- “Introduction to EPC & Energy Sector and Opportunities Available” for the 8<sup>th</sup> semester ME Students on 16<sup>th</sup> March 2018 by Mr. Vasant Mestry, Managing Director, Suvidya Institute of Technology.
- “Selection & operation of valves” for the 6<sup>th</sup> semester ME Students on 6<sup>th</sup> Feb 2018 by Mr. Deepak Mirchandani, Marketing Manager, Technik Valves PVT Ltd.
- “Industrial application of ANSYS” for the 6<sup>th</sup> semester ME Students on 22<sup>nd</sup> Feb 2018 by Mr. Krunal Patel, Technical service Engineer, Fluid codes FZLLE.

- “Industrial application of ANSYS” for the 4<sup>th</sup> semester ME Students on 22<sup>nd</sup> Feb 2018 by Mr. Krunal Patel, Technical service Engineer, Fluid codes FZLLE.
- “Industrial Safety” for the 4<sup>th</sup> semester ME Students on 14<sup>th</sup> March 2018 by Mr. Jawahar Varelani, Head-HR, Riddhi Pharma, Ankleshwar.
- “Manufacturing Processes & its applications” for the 4<sup>th</sup> semester ME Students on 2018 by Mr. Sanjay Makwana, Manager, Miranda tools, Ankleshwar.
- “Offshore Platforms” for the 4<sup>th</sup> semester ME Students on 21<sup>st</sup> April 2018 by Mr. Shailesh Vadher, Manager, L&T, Hazira Surat.

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## INDUSTRY VISITS

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### [DEPARTMENT OF MATHEMATICS, SCIENCE & HUMANITIES]

- ATRI CHEMOPHARMA, Ankleshwar on 30<sup>th</sup> Jan 2018 by 2<sup>nd</sup> semester CE students.
- ATRI CHEMOPHARMA, Ankleshwar on 30<sup>th</sup> Jan 2018 by 2<sup>nd</sup> semester EST students.
- NIRANJAN LABORATORY, Ankleshwar on 24<sup>th</sup> Feb 2018 by 2<sup>nd</sup> semester CE students.
- NIRANJAN LABORATORY, Ankleshwar on 24<sup>th</sup> Feb 2018 by 2<sup>nd</sup> semester EST students.
- SIGMA SCIENTIFIC GLASS PVT LTD, Ankleshwar on 24<sup>th</sup> Mar 2018 by 2<sup>nd</sup> semester CE students.
- SIGMA SCIENTIFIC GLASS PVT LTD, Ankleshwar on 24<sup>th</sup> Mar 2018 by 2<sup>nd</sup> semester EST students.

### [DEPARTMENT OF CHEMICAL ENGINEERING]

- UPL 1/2, Ankleshwar on 19<sup>th</sup> Jan 2018 by 8<sup>th</sup> semester CE students.
- Amul, Anand on 27<sup>th</sup> March 2018 by 8<sup>th</sup> semester CE students.

- GNFC, Bharuch on 2<sup>nd</sup> Feb 2018 by 6<sup>th</sup> semester CE students.
- Zydus, Ankleshwar on 26<sup>th</sup> Feb 2018 by 6<sup>th</sup> semester CE students.
- PRIVI, Jhagadia on 12<sup>th</sup> March 2018 by 6<sup>th</sup> semester CE students.
- Shree Ganesh Sugar Factory on 18<sup>th</sup> Jan 2018 by 4<sup>th</sup> semester CE students.

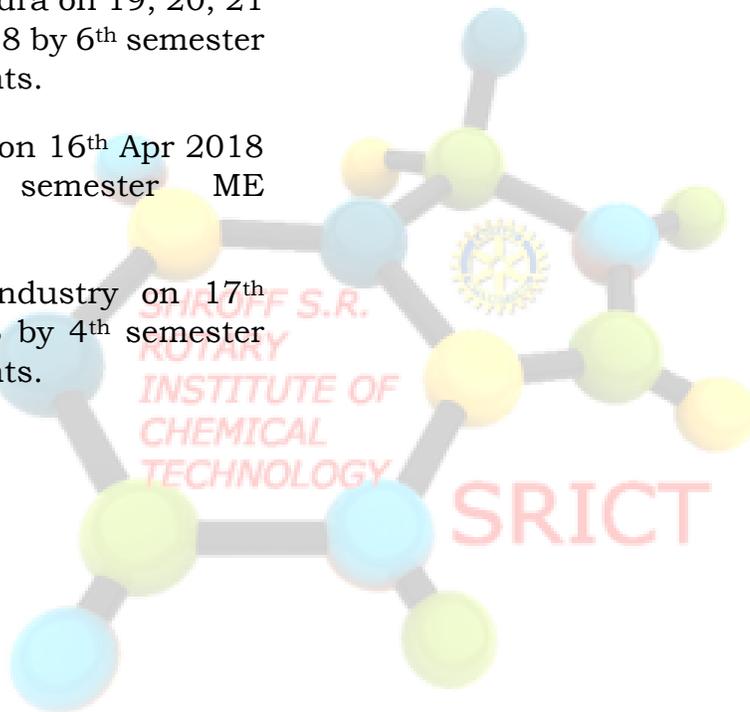
### [DEPARTMENT OF ENVIRONMENTAL SCIENCE AND TECHNOLOGY]

- National Environmental Engineering Research Institute (NEERI), Nagpur on 1<sup>st</sup> & 2<sup>nd</sup> Feb 2018 by 8<sup>th</sup> semester EST students.
- Amul Dairy, Anand on 14<sup>th</sup> March 2018 by 8<sup>th</sup> semester EST students.
- Apcotex Ltd, Ankleshwar on 15<sup>th</sup> March 2018 by 6<sup>th</sup> semester EST students.

- Alkem laboratories Ltd, Mandva on 21<sup>st</sup> March 2018 by 6<sup>th</sup> semester EST students.

### [DEPARTMENT OF MECHANICAL ENGINEERING]

- Sardar Patel renewal energy research institute, Anand on 14<sup>th</sup> Feb 2018 by 8<sup>th</sup> semester ME students.
- Indo German tool room on 10<sup>th</sup> April 2018 by 8<sup>th</sup> semester ME students.
- Patel Ice Factory on 19<sup>th</sup> Feb 2018 by 6<sup>th</sup> semester ME students.
- Adani Tundra on 19, 20, 21 March 2018 by 6<sup>th</sup> semester ME students.
- Jay metal on 16<sup>th</sup> Apr 2018 by 6<sup>th</sup> semester ME students.
- Colortex industry on 17<sup>th</sup> April 2018 by 4<sup>th</sup> semester ME students.



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## SCIENTIFIC ARTICLES: प्रयुक्तिलेख

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SR.NO.	TITLE	AUTHOR
1.	WORLD HIGHEST VOLTAGE SUBSTATION FINALLY TESTED AT BINA, MP	KAPADIA MOHAMMADHUSEIN, EE 8 <sup>TH</sup> SEM
2.	THESE ANCIENT, SWIMMING REPTILES MAY HAVE BEEN THE BIGGEST ANIMALS OF ALL TIME	PUNIT PATEL, CT 4 <sup>TH</sup> SEM
3.	How NASA IS PLANNING TO TOUCH THE SUN	MAHIMA MAHESHWARI, EST 4 <sup>TH</sup> SEM
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## WORLD HIGHEST VOLTAGE SUBSTATION FINALLY TESTED AT BINA, MP.

[KAPADIA MOHMEDHUSEIN, 8<sup>TH</sup>  
SEMESTER, ELECTRICAL  
ENGINEERING]

Hon'ble Union Minister of State for Power (I/C) Shri Jyotiraditya M. Scindia, dedicated the 1200 kV Ultra High Voltage (UHV) AC National Test Station of Power Grid Corporation of India Limited (POWERGRID) to the Nation today. The world's highest voltage level, 1200kV UHVAC sub-station is located at Bina in Madhya Pradesh.

It is an outstanding International achievement in high voltage power transmission. The project involves a unique Public Private Partnership (PPP) model, where all the UHV equipment have been developed indigenously by a consortium of 35 Indian power equipment manufacturers in association with POWERGRID, who provided the necessary resources and basic system design & specifications. The private manufacturers have created suitable facilities to design & manufacture 1200 kV equipment for the test station.

The test station is an important milestone in development of India's electric power transmission. This will facilitate transfer of bulk power from remotely located generating stations to long distance load centers. This innovation will also result in saving of huge Right of Way (ROW), minimize impact on flora & fauna and will ensure cost effective

bulk power transmission corridors in the country. One 1200kV Single Circuit line is expected to transmit 6000 to 8000 MW power, thereby offers higher power transfer capacity per meter of ROW in comparison to 400 kV and 800kV transmission system. Further, due to indigenous development of equipment / materials, the system will give a strategic advantage besides cost economy and timely Operation & Maintenance.

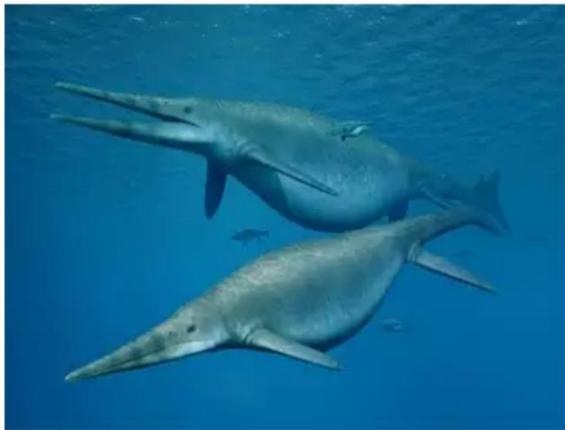
POWERGRID a 'Navratna' Company and the 'Central Transmission Utility (CTU)' of the country is at present operating more than 96,000 ckt. Kms of transmission lines along with 159 Sub-stations having a transformation capacity of over 1,51,000 MVA. With the use of state-of-the-art preventive maintenance techniques, average availability of transmission system is consistently maintained at 99.9%. The Inter-regional power transmission capacity of National Grid today is about 28,000 MW.

## THESE ANCIENT, SWIMMING REPTILES MAY HAVE BEEN THE BIGGEST ANIMALS OF ALL TIME

[PUNIT PATEL, 4<sup>TH</sup> SEMESTER,  
CHEMICAL TECHNOLOGY]

In 2016, Paul de la Salle was walking along the beach in the British town of Lilstock when he came across a rock that looked suspiciously bone-like. Specifically, a 205-million-year-old fragment of bone, possibly belonging to the jaw of a long-extinct ichthyosaur.

De la Salle is an amateur fossil hunter, so he knew to call experts Dean Lomax and Judy Massare to confirm the hunch. And it turned out to be quite the find: The three-foot-long piece of jawbone de la Salle eventually assembled from the Lilstock beach may have belonged to a creature as much as 85 feet long. Their research, published this week in PLOS ONE, would put the giant ichthyosaur above even the blue whale, commonly agreed to be the largest animal ever to have lived on Earth.



Ichthyosaur comes from the Greek words for "fish lizard," but ichthyosaurs were neither fish nor lizards (nor dinosaurs, for that matter). Like modern day whales, they evolved from terrestrial creatures that did an about-face and returned to the sea, from whence all

life on Earth once sprang. Unlike whales, the ichthyosaurs' ancestor was not a mammal but a reptile, and it made its watery homecoming sometime during the early Triassic period, back when whale ancestors were still scurrying around on land laying eggs. But once there, the creatures developed the streamlined body and powerful, paddle-shaped fins of a dolphin, along with the marine predator's toothy beak. And though they were reptiles and not mammals, ichthyosaurs gave birth to live young and were likely warm-blooded.

Lomax, of the University of Manchester, measured the Lilstock fragment—a bone of the lower jaw called the "surangular"—and quickly understood that this was something special: "I wasn't entirely sure how big the estimate would turn out to be until I saw the specimen in person," Lomax says. He and Massare, a professor and marine reptile expert at the State University of New York at Brockport traveled to British Columbia's Royal Tyrrell Museum of Paleontology to compare the new find to the largest ichthyosaur specimen previously known. The Lilstock surangular was approximately 25 percent larger than the matching bone in the museum specimen. (That behemoth, now dethroned as the largest of the giant ichthyosaurs, is just shy of 70 feet.)

The discovery not only changes our understanding of the ichthyosaur's range of sizes, but gives a new explanation for unidentified bones uncovered in Gloucestershire in the 1850s. Those fragments were so

large that scientists at the time assumed they must belong to dinosaurs; something massive and land-based, like a stegosaurus or a sauropod. But Lomax, along with Massare and de la Salle, posit that these bones are also ichthyosaur jawbones. No one had ever imagined the delicate Delphine Ichthyosaur could approach the size of the giant beasts that walked the ancient earth, or that these giants persisted for so long—the newest specimen dates to the Late Triassic, meaning giant Ichthyosaurs existed until the mass extinction at the end of the Triassic.

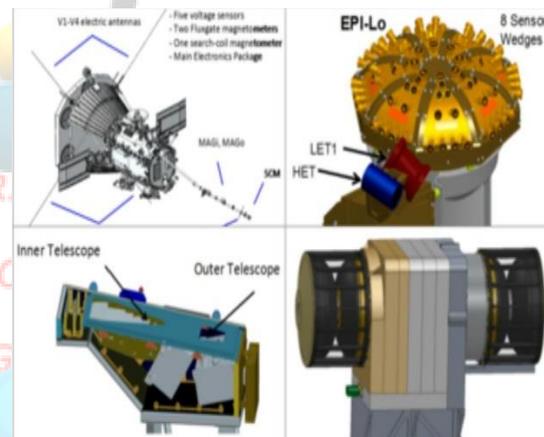
### HOW NASA IS PLANNING TO TOUCH THE SUN?

[MAHIMA MAHESHWARI, 4TH SEMESTER, EST]

Our sun might not seem as enigmatic as more exotic, distant stars, but it's still a marvelously mysterious miasma of incandescent plasma. And it's certainly worthy of our scientific attention: Curiosity aside, a violent solar event could disrupt satellites and cause \$2 trillion in damages for the U.S. alone. Yet, despite living in its atmosphere, we don't understand some of its defining phenomena. For sixty years, we haven't understood why the surface is a cozy 5,500 Celsius, while the halo called the corona—several million kilometers away from the star's surface and 12 orders of magnitude less dense—boasts a positively sizzling 1-2 million Celsius.

To figure out why, NASA needs to fly a little closer to the sun—and touch it.

We know that magnetic reconnection—when magnetic field lines moving in opposite directions intertwine and snap like rubber bands—propels nuclear weapon-like waves of energy away from surface. Meanwhile, magnetohydrodynamic waves—vibrating guitar string-like waves of magnetic force driven by the flow of plasma—transfer energy from the surface into corona. However, without more data, our understanding of phenomena like coronal heating and solar wind acceleration remain largely theoretical...but not for long.

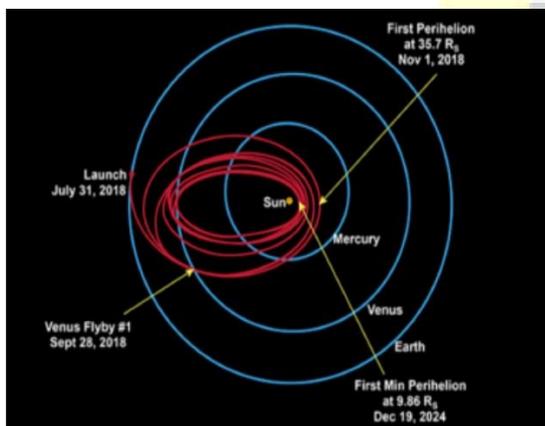


Launching in 2018, NASA's Solar Probe Plus will travel nearly seven years, setting a new record for fastest moving object as it zips 37.6 million kilometers closer to the sun than any spacecraft that has ever studied our host star. But what manner of sensory equipment does one bring to Dante's Inferno?

The Solar Wind Electrons Alphas and Protons systems, or SWEAP, will monitor charges created by colliding electrons, protons and helium ions to analyze solar wind—ninety times

closer to the sun than previous attempts. Similarly, the ISIS (Integrated Science Investigation of the Sun) employs a state-of-the-art detection system to analyze energetic particles (think: cancer-causing, satellite-disabling particles).

The FIELDS sensor, meanwhile, will analyze electric and magnetic fields, radio emissions, and shock waves—while gathering information on the high-speed dust particles sanding away at the craft using a technique discovered by accident. Lastly, the Wide-field Imager for Solar Probe, or WISPR telescope, will make 3D, cat-scan-like images of solar wind and the sun’s atmosphere.



There’s just one problem. Between intense heat, solar radiation, high-energy particles, the fallout of solar storms, dust, and limited communication opportunities at closest approach, all that sensitive equipment is going to an environment that almost makes Juno’s new home look sympathetic by comparison.

One of the things we had to watch out for in the design,” according to Lockwood, was the electrical

“charging” of the spacecraft by the solar wind. The probe has to be conductive “so that the instruments that are actually measuring the solar wind don’t have interference.”

However, that comes with “interesting design challenges, because you’re not only going into the sun” as heat shield mechanical engineer Beth Congdon tells, “You get hot on approach, and then come out and get cold,” over and over for 7 flybys and 24 orbits. “You actually need to have it cyclically survive hot and cold temperatures.” And high energy particles. And hypervelocity dust. For that, you need a heat shield “different from any other heat shield that has ever existed.”

Tags: sun solarprobe space NASA short science articles.

### TATTOOS ARE PERMANENT, BUT THE SCIENCE BEHIND THEM JUST SHIFTED

[KEVIN PATEL, 4<sup>TH</sup> SEMESTER, CHEMICAL ENGINEERING]



New research suggests that our bodies might have an intriguing way of handling tattoos—and the findings could eventually help us get better at removing them.

If you ask most people how tattoos work, they're likely to get it a little bit wrong. The most pervasive oversimplification is that tattoo needles inject ink into the skin, deep enough that it stays put. In fact, tattoo needles are more like the nib of a fountain pen than a syringe; the ink isn't shot down through the needle, but suspended at the end of it when an artist dips the tool into a well. Then, when the tip of the needle pierces a hole in the recipient's skin (both the epidermis and the dermis beneath it), capillary action—the same force that makes liquid creep up the sides of a straw—draws the ink down into the dermis.

That's how the ink gets into your skin. But why does it stay there?

Scientists have known for a while that tattoos are made possible not by ink-saturated skin cells, but by immune cells called macrophages. These white blood cells exist to gobble up foreign and cellular debris, and they come rushing whenever you're wounded. So it's not surprising that they show up when a needle keeps stabbing you and your skin keeps sucking up ink. The macrophages chow down, and their cellular membranes keep your tattoo ink nice and cozy for years to come.

Now, researchers have answered another question: How the heck do those macrophages stay put for so long? Well, they don't. According to a study published Tuesday in the *Journal of Experimental Medicine*, tattoos can persist after macrophages die. When the immune cells wither, they leave behind ink

among your skin cells—just as it was when you first got your tattoo. Lo and behold, the new mouse study suggests, new macrophages rush into the fray to pick up the mantles of their fallen brethren.

In other words, your tattoo isn't just the remnant of a battle between your proclivity for body art and your immune system. It's a war that never stops.

The researchers, led by Sandrine Henri and Bernard Malissen of the Centre d'Immunologie de Marseille-Luminy, started out studying naturally occurring pigments in the macrophages of black mice. When the cells that create the rodents' coloring die, they release dark pigment—and macrophages come to swallow it for safe keeping. Watching the process made them curious about how the process worked with tattoo ink, and they were surprised to see so little research had been done on the subject.

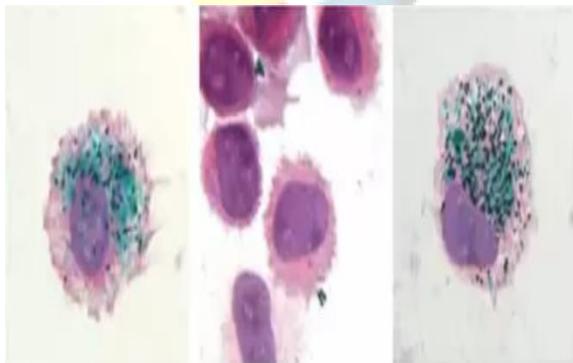
Naturally, this led them to tattoo a mouse—one engineered to make its macrophages easy to kill off. After confirming that all pigment was locked away inside macrophages and then destroying them, the researchers noted no visible changes in the tattoo. And eventually, new macrophages arrived to eat the ink. They also grafted a tattooed piece of skin from one mouse to another, and noted six weeks later that the ink had mostly been re-ingested by macrophages native to the new host.

The researchers are fairly confident that this process is similarly dynamic

in humans, though it's possible our macrophages last longer than those in mice. There may not be a constant turnover, they say, but over the lifetime of a tattoo it's likely some macrophages die and need replacing.

Of course, tattoos aren't actually forever. They do fade away in time. Sunlight is anecdotally known to leach the color out of tattoos, but the study authors think macrophage turnover they discovered could also play a role.

"Fading is likely due to the fact that during the successive capture-release-capture cycles that we have described, minute amounts of released pigments are drained away from the skin," Malissen said in a statement.



## LIFE ON SATURN'S MOON!

[VANSHIKA RANA, 2<sup>ND</sup> SEMESTER, EST]



It's official: Saturn's moon has just about everything you need to make life

Deep-sea vents could infuse Enceladus' ocean with microbe food.

The results are back from the Cassini spacecraft's closest encounter with Enceladus, and they're good news for folks who hope to find aliens on Saturn's icy moon.

Cassini discovered geysers shooting out of Enceladus' South Pole back in 2005. The eruptions pointed to an ocean inside the giant snowball, heated by Saturn's gravity deforming the moon's core. Where there's water, there may be life, so NASA has considered Enceladus a top spot to search for alien microorganisms ever since.

In October 2015, Cassini plunged to within 30 miles of the moon's surface, swooping through its geysers and trying to taste the ocean below. Scientists have just finished

parsing the data from that encounter, and they reveal that Enceladus has one more essential ingredient for life: food.

Although we still don't know whether or not Enceladus actually has simple life forms living in its ocean, "almost all of the conditions that astrobiologists have identified for habitability are present on Enceladus: water, organics, and a chemical energy source," says Hunter Waite from the Southwest Research Institute." The only things that are left on the checklist are phosphorus or sulfur."

The hydrogen is also significant for where it may come from. After evaluating a number of sources, Waite's team concluded that the hydrogen is almost definitely coming from active hydrothermal vents at the bottom of the moon's ocean—as the water makes contact with these molten rocks, a chemical reaction splits the water, forming hydrogen.

"If correct, this observation has fundamental implications for the possibility of life on Enceladus," wrote geochemist Jeffrey Seewald in a commentary accompanying the paper. "Chemical disequilibrium that is known to support microbial life in Earth's deep oceans is also available to support life in the Enceladus Ocean."

As for searching for the sulfur and phosphorus—the two remaining ingredients for life as we know it that

will have to wait for another spacecraft. Cassini will be retiring this year without making any more trips to Enceladus. And in any case, Waite says its instruments likely wouldn't be able to detect those elements at low levels. Cassini was built before scientists knew about the geysers, so it's not built to test for amino acids and other possible indicators of life.

However, NASA is potentially interested in funding future Enceladus missions through its 2017 New Frontiers program. Of course, if an Enceladus mission does receive funding, the spacecraft likely wouldn't reach Saturn's moon until the 2030s, says Waite. "That's the tough thing about the outer solar system."

Until then, we'll just have to hope that scientists dig up some more clues in the treasure trove of data that Cassini has sent back over more than a decade.

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## SCIENTISTS TRY TO UNWRAP THE SECRETS OF EGYPTIAN MUMMY DNA

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[JASH GANDHI, 4<sup>TH</sup> SEMESTER, CHEMICAL ENGINEERING]



The Ancient Egyptians were famously fantastic at preserving their dead. But while their mummification methods helped protect soft tissues like skin from the ravages of time, the dry, hot climes that kept the deceased so pristine didn't do their genetic material any favors. Heat might help desiccate a corpse before rot sets in, but it also speeds up the degradation of DNA. So while scientists have been able to stare into the faces of countless Ancient Egyptians, they've had a lot of trouble deciphering any of the secrets of their genetic legacy—until now.

Researchers publishing in *Nature Communications* believe they've conducted the first comprehensive genetic study on Egyptian mummies to avoid contamination. Their results suggest that modern-day Egyptians don't have much in common, genetically, with those entombed in their homeland.

Archeologists looked at 151 mummified remains from all walks of life, from lavish priestly burials to simple interments, all found at the Abusir el-Maleq archaeological site some 70 miles south of Cairo. In particular, the researchers zeroed in on mitochondrial DNA of these mummies. The DNA we usually talk about lives in the nucleus of each of our cells, and it comes from each of our parents. Mitochondrial DNA lives in the mitochondria, often called the powerhouse of the cell, and we only get it from our mothers. While it can't tell your entire genetic story, mitochondrial DNA is great for showing genetic changes over time—how different related lineages moved and met around the globe throughout the ages. In this case, they were able to get a clear read on mitochondrial DNA from 90 mummies, while only 3 mummies yielded reliable nuclear DNA sequences.

According to their findings, Egyptian demographics didn't change very much during the time range in which the various mummies lived—between 1400 BC and 400 AD.

"There was no detectable change for those 1,800 years of Egyptian history," lead study author Johannes Krause of the Max Planck Institute for the Science of Human History in Germany told Reuters. "The big change happened between then and now. "Back then, it seems that the mummified Egyptians were most closely related to folks from the Levant, a region of the Eastern Mediterranean including modern-day Turkey, Israel, and Palestine.

Today, Egyptians have more sub-Saharan African DNA—some eight percent more of their ancestry comes from this region. The homogeneity throughout the mummies studied is a bit surprising, as Egypt served as quite a cultural crossroads during this time. The results suggest that foreign invaders and bustling trade routes did little to rock the genetic continuity of Ancient Egyptians—at least in Abusir el-Maleq. Other researchers—and the study authors themselves—point out that the results can't be applied wholesale to the entire Ancient Egyptian culture. It's possible that more genetic mixing, including the addition of more sub-Saharan African genes, might have occurred on other shores of the Nile. If sub-Saharan genes did flood in starting just 1,500 years ago, it's likely that the growing slave trade in the area had something to do with it. Hopefully, future studies will help confirm the findings on these fragile remnants of DNA—and uncover more secrets wrapped up on other mummies across the region.

“This is the first glimpse of the genetic history of Egypt,” Krause told Nature. “But it’s really just the start.”

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## HYPERLOOP: THE INOVATIVE TECHNOLOGY OF TRANSPORTATION

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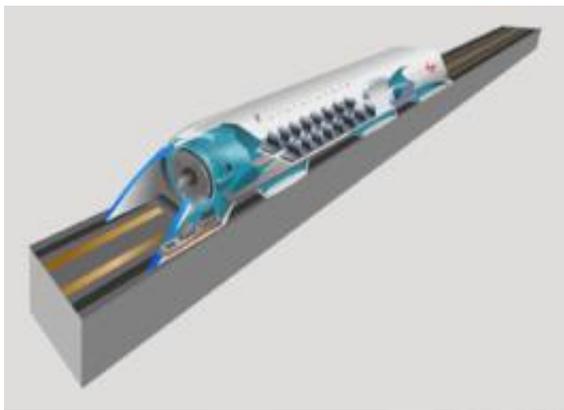
[SUDEEP DESAI, 4<sup>TH</sup> SEMESTER, EST]

A Hyperloop is a proposed mode of passenger and/or freight transportation, first used to describe an open-source vactrain design released by a joint team from Tesla and SpaceX. Drawing heavily from Robert Goddard's vactrain, a hyperloop is a sealed tube or system of tubes through which a pod may travel free of air resistance or friction conveying people or objects at high speed while being very efficient.

Elon Musk's version of the concept, first publicly mentioned in 2012, incorporates reduced-pressure tubes in which pressurized capsules ride on air bearings driven by linear induction motors and air compressors.

The Hyperloop Alpha concept was first published in August 2013, proposing and examining a route running from the Los Angeles region to the San Francisco Bay Area roughly following the Interstate 5 corridor. The paper conceived of a Hyperloop system that would propel passengers along the 350-mile (560 km) route at a speed of 760 mph (1,200 km/h), allowing for a travel time of 35 minutes, which is considerably faster than current rail or air travel times. Preliminary cost estimates for this LA-SF suggested route were included in the white paper—US\$6 billion for a passenger-only version, and US\$7.5 billion for a

somewhat larger-diameter version transporting passengers and vehicles—although transportation analysts had doubts that the system could be constructed on that budget; some analysts claimed that the Hyperloop would be several billion dollars overbudget, taking into consideration construction, development and operation costs.



also been made that the Hyperloop is too susceptible to disruption from a power outage or terror attacks to be considered safe.



The Hyperloop concept has been explicitly "open-sourced" by Musk and SpaceX, and others have been encouraged to take the ideas and further develop them.

To that end, a few companies have been formed, and several interdisciplinary student-led teams are working to advance the technology. SpaceX built an approximately 1-mile-long (1.6 km) subscale track for its pod design competition at its headquarters in Hawthorne, California.

Some experts are skeptical, saying that the proposals ignore the expenses and risks of developing the technology and that the idea is "completely impractical". Claims have

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## SHORT STORIES

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[TEAM KATHAN]

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### FACE DIFFICULTIES POSITIVELY

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This parable is told of a farmer who owned an old mule. The mule fell into the farmer's well. The farmer heard the mule praying or whatever mules do when they fall into wells.

After carefully assessing the situation, the farmer sympathized with the mule, but decided that neither the mule nor the well was worth the trouble of saving. Instead, he called his neighbors together, told them what had happened, and enlisted them to help haul dirt to bury the old mule in the well and put him out of his misery.

Initially the old mule was hysterical! But as the farmer and his neighbors continued shoveling and the dirt hit his back, a thought struck him. It suddenly dawned on him that every time a shovel load of dirt landed on his back, HE WOULD SHAKE IT OFF AND STEP UP!

This he did, blow after blow. "Shake it off and step up....shake it off and step up.....shake it off and step up!" He repeated to encourage himself. No matter how painful the blows, or how distressing the situation seemed, the old mule fought panic and just kept right on SHAKING IT OFF AND STEP UP!

It wasn't long before the old mule, battered and exhausted, steeped triumphantly over the wall of that well! What seemed like it would bury him actually helped him... all because of the manner in which he handled his adversity.

THAT'S LIFE! If we face our problems and respond to them positively, and refuse to give in to panic, bitterness, or self-pity.

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### LET GO OF YOUR STRESSES!

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A psychologist walked around a room while teaching stress management to an audience. As she raised a glass of water, everyone expected they'd asked the "half empty or half full" question. Instead, with a smile on her face, she inquired: "How heavy is this glass of water?"

Answers called out of various range.

She replied, "The absolute weight doesn't matter. It depends on how long I hold it. If I hold it for a minute, it's not a problem. If I hold it for an hour, I'll have an ache in my arm. If I hold it for a day, my arm will feel numb and paralyzed. In each case, the weight of the glass doesn't change, but the longer I hold it, the heavier it becomes."

She continued, "The stresses and worries in life are like that glass of

water. Think about them for a while and nothing happens. Think about them a bit longer and they begin to hurt. And if you think about them all day long, you will feel paralyzed – incapable of doing anything.”

It’s important to remember to let go of your stresses. As early in the evening as you can, put all your burdens down. Don’t carry them through the evening and into the night. Remember to put the glass down!

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## THE STORY OF A WOODCUTTER

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Once upon a time, a very strong woodcutter asked for a job in a timber merchant and he got it. The pay was really good and so was the work condition. For those reasons, the woodcutter was determined to do his best.

His boss gave him an axe and showed him the area where he supposed to work.

The first day, the woodcutter brought 18 trees.

“Congratulations,” the boss said. “Go on that way!”

Very motivated by the boss words, the woodcutter tried harder the next day, but he could only bring 15 trees. The third day he tried even harder, but he could only bring 10 trees. Day after day he was bringing less and less trees.

“I must be losing my strength”, the woodcutter thought. He went to the boss and apologized, saying that he could not understand what was going on.

“When was the last time you sharpened your axe?” the boss asked.

“Sharpen? I had no time to sharpen my axe. I have been very busy trying to cut trees....”

Reflection: our lives are like that. We sometimes get so busy that we don’t take time to sharpen the “axe”. In today’s world, it seems that everyone is busier than ever, but less happy than ever.

Why is that? Could it be that we have forgotten how to stay “sharp”? There’s nothing wrong with activity and hard work. But we should not get so busy that we neglect the truly important things in life, like our personal life, taking time for our family, taking time to read etc.

We all need time to relax, to think and meditate, to learn and grow. If we don’t take time to sharpen the “axe”, we will become dull and lose our effectiveness.

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## THE FROG IN HOT WATER

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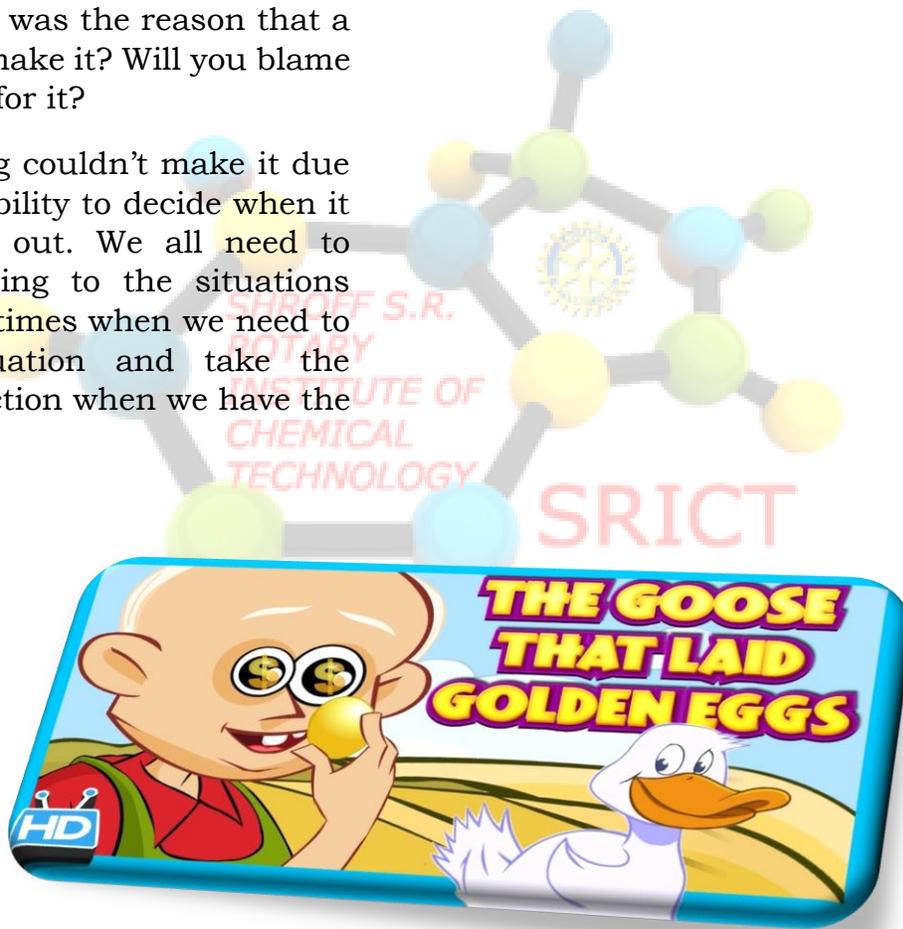
Once the frog fell in a vessel of hot water. The water was still on a gas stove. The frog still did not try to jump out of the vessel, instead just stayed in it. As the temperature of

the water started to rise, the frog managed to adjust its body temperature accordingly. As the water started to reach the boiling point, the frog was no longer able to keep up and manage its body temperature according to the water temperature.

The frog tried to jump out of the vessel but with water temperature reaching its boiling point, the frog was not able to bear it and couldn't make it. What was the reason that a frog couldn't make it? Will you blame the hot water for it?

Moral: the frog couldn't make it due to its own inability to decide when it had to jump out. We all need to adjust according to the situations but there are times when we need to face the situation and take the appropriate action when we have the

strength to do so before it's too late. Walk out before you need to jump.



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## GENERAL ARTICLES

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<b>SR.NO.</b>	<b>TITLE</b>	<b>AUTHOR</b>
1.	STEPHAN HAWKINGS	SAUMYA PANPALIA, ME 4 <sup>TH</sup> SEM
2.	FIFA WORLD CUP 2K18	UDIT DAVE, ME 4 <sup>TH</sup> SEM
3.	UNITED STATE MARINE CROPS	VISHAL PRAJAPATI, ME 4 <sup>TH</sup> SEM
4.	WHAT IF WE COULD CLEAN WASTEWATER WITH CORN COBS	PRASANT PATIL, ME 4 <sup>TH</sup> SEM
5.	TIME	ADWITIYA BHATTACHARYA, EST 8 <sup>TH</sup> SEM
6.	PERSONALITY SKILL DEVELOPMENT	PARTH PRAJAPATI, CE 6 <sup>TH</sup> SEM
7.	5S	SAUMYA PANPALIA, ME 4 <sup>TH</sup> SEM
8.	THE DENIAL OF TRUTH	RUCHIT SHOEMAKER, ME 4 <sup>TH</sup> SEM
9.	MY REVIEW AND EXPERIENCE AS A TEACHING ASSISTANCE	RUCHIT SHOEMAKER, ME 4 <sup>TH</sup> SEM

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## STEPHAN HAWKINGS

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[SAUMYA PANPALIA, 4<sup>TH</sup> SEMESTER,  
MECHANICAL ENGINEERING]



Professor Stephen William Hawking was born on 8th January 1942 (exactly 300 years after the death of Galileo) in Oxford, England. His parents' house was in north London but during the Second World War Oxford was considered a safer place to have babies. When he was eight his family moved to St. Albans, a town about 20 miles north of London. At the age of eleven, Stephen went to St. Albans School and then on to University College, Oxford (1952); his father's old college. Stephen wanted to study mathematics although his father would have preferred medicine. Mathematics was not available at University College, so he pursued physics instead. After three years and not very much work, he was awarded a first class honours degree in natural science.

In October 1962, Stephen arrived at

the Department of Applied Mathematics and Theoretical Physics at the University of Cambridge to do research in cosmology, there being no-one working in that area in Oxford at the time. His supervisor was Dennis Sciama, although he had hoped to get Fred Hoyle who was working in Cambridge. After gaining his PhD (1965) with his thesis titled 'Properties of Expanding Universe, he became, first, a research fellow (1965) then Fellow for Distinction in Science (1969) at Gonville & Caius College. In 1966 he won the Adams Prize for his essay 'Singularities and the Geometry of Space-time'. Stephen moved to the Institute of Astronomy (1968), later moving back to DAMTP (1973), employed as a research assistant, and published his first academic book, *The Large Scale Structure of Space-Time*, with George Ellis. During the next few years, Stephen was elected a Fellow of the Royal Society (1974) and Sherman Fairchild Distinguished Scholar at the California Institute of Technology (1974). He became a Reader in Gravitational Physics at DAMTP (1975), progressing to Professor of Gravitational Physics (1977). He then held the position of Lucasian Professor of Mathematics (1979-2009). The chair was founded in 1663 with money left in the will of the Reverend Henry Lucas who had been the Member of Parliament for the University. It was first held by Isaac Barrow and then in 1669 by Isaac Newton. From 2009, Stephen was employed as the Dennis Stanton Avery and Sally Tsui Wong-Avery Director of Research at

DAMTP.

Professor Stephen Hawking worked on the basic laws which govern the universe. With Roger Penrose he showed that Einstein's general theory of relativity implied space and time would have a beginning in the Big Bang and an end in black holes (1970). These results indicated that it was necessary to unify general relativity with quantum theory, the other great scientific development of the first half of the 20th century. One consequence of such a unification that he discovered was that black holes should not be completely black, but rather should emit 'Hawking' radiation and eventually evaporate and disappear (1974). Another conjecture is that the universe has no edge or boundary in imaginary time. This would imply that the way the universe began was completely determined by the laws of science. Towards the end of his life, Stephen was working with colleagues on a possible resolution to the black hole information paradox, where debate centres around the conservation of information.

His many publications included *The Large Scale Structure of Spacetime* with G F R Ellis, *General Relativity: An Einstein Centenary Survey*, with W Israel, and *300 Years of Gravitation*, with W Israel. Among the popular books Stephen Hawking published are his best seller *A Brief History of Time*, *Black Holes and Baby Universes and Other Essays*, *The Universe in a Nutshell*, *The Grand Design* and *My Brief History*.

Professor Stephen Hawking received thirteen honorary degrees. He was awarded CBE (1982), Companion of Honour (1989) and the Presidential Medal of Freedom (2009). He was the recipient of many awards, medals and prizes, most notably the Fundamental Physics prize (2013), Copley Medal (2006) and the Wolf Foundation prize (1988). He was a Fellow of the Royal Society and a member of the US National Academy of Sciences and the Pontifical Academy of Sciences.

In 1963 Stephen was diagnosed with ALS, a form of Motor Neurone Disease, shortly after his 21st birthday. In spite of being wheelchair-bound and dependent on a computerised voice system for communication Stephen continued to combine family life (he has three children and three grandchildren) with his research into theoretical physics, in addition to an extensive programme of travel and public lectures. Thanks to the Zero-G Corporation, he experienced weightlessness in 2007 and always hoped to make it into space one day.

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## FIFA WORLD CUP 2K18: RUSSIA

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[UDIT DAVE, 4<sup>TH</sup> SEMESTER,  
MECHANICAL ENGINEERING]



What is FIFA world cup???

The **FIFA World Cup**, often simply called the **World Cup**, is an international association football competition contested by the senior men's national teams of the members of the *Fédération Internationale de Football Association* (FIFA), the sport's global governing body. The championship has been awarded every four years since the inaugural tournament in 1930, except in 1942 and 1946 when it was not held because of the Second World War. The current champion is Germany, which won its fourth title at the 2014 tournament in Brazil.

The current format of the competition involves a qualification phase, which currently takes place over the preceding three years, to determine which teams qualify for the tournament phase, which is often called the *World Cup Finals*. 32 teams, including the automatically qualifying host nation(s), compete in the tournament phase for the title at venues within the host nation(s) over a period of about a month.

The 20 World Cup tournaments have been won by eight national teams. Brazil have won five times, and they are the only team to have played in every tournament. The other World Cup winners are Germany and Italy, with four titles each; Argentina and inaugural winner Uruguay, with two titles each; and England, France and Spain, with one title each.

The World Cup is the most prestigious association football tournament in the world as well as the most widely viewed and followed sporting event in the world, exceeding even the Olympic Games the cumulative audience of all matches of the 2006 FIFA World Cup was estimated to be 26.29 billion with an estimated 715.1 million people watching the final match, a ninth of the entire population of the planet

The **2018 FIFA World Cup** will be the 21st FIFA World Cup, a quadrennial international football tournament contested by the men's national teams of the member associations of FIFA. It is scheduled to take place in Russia from 14 June to 15 July 2018, after the country was awarded the hosting rights on 2 December 2010. This will be the first World Cup held in Europe since the 2006 tournament in Germany; all but one of the stadium venues are in European Russia, west of the Ural Mountains, to keep travel time manageable.

The final tournament will involve 32 national teams, which include 31 teams determined through qualifying

competitions and the automatically qualified host team. Of the 32 teams, 20 will be making back-to-back appearances following the last tournament in 2014, including defending champions Germany, while Iceland and Panama will both be making their first appearances at a FIFA World Cup. A total of 64 matches will be played in 12 venues located in 11 cities. The final will take place on 15 July at the Luzhniki Stadium in Moscow.

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## UNITED STATE MARINE CROPS

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[VISHAL PRAJAPATI, 4<sup>TH</sup> SEMESTER, MECHANICAL ENGINEERING]



The **United States Marine Corps (USMC)**, also known as the **United States Marines**, is a branch of the United States Armed Forces responsible for conducting amphibious operations with the United States Navy. The U.S. Marine Corps is one of the four armed service branches in the U.S. Department of Defense (DoD) and one of the seven uniformed services of the United States.

The Marine Corps has been a component of the U.S. Department of the Navy since 30 June 1834, working closely with naval forces. The USMC operates installations on land and aboard sea-going amphibious warfare ships around the world. Additionally, several of the Marines' tactical aviation squadrons, primarily Marine Fighter Attack squadrons, are also embedded in Navy carrier air wings and operate from the aircraft carriers. The history of the Marine Corps began when two battalions of Continental Marines were formed on 10 November 1775 in Philadelphia as a service branch of infantry troops capable of fighting on both at sea and on shore. In the Pacific theater of World War II the Corps took the lead in a massive campaign of amphibious warfare, advancing from island to island. As of 2017, the USMC has around 186,000 active duty members and some 38,500 reserve Marines. It is the smallest U.S. military service within the D

The Marine Corps was founded to serve as an infantry unit aboard naval vessels and was responsible for the security of the ship and its crew by conducting offensive and defensive combat during boarding actions and defending the ship's officers from mutiny; to the latter end, their quarters on ship were often strategically positioned between the officers' quarters and the rest of the vessel. Continental Marines manned raiding parties, both at sea and ashore. America's first amphibious assault landing occurred early in the Revolutionary

War on 3 March 1776 as the Marines gained control of Fort Montague and Fort Nassau, a British ammunition depot and naval port in New Providence, the Bahamas. The role of the Marine Corps has expanded significantly since then; as the importance of its original naval mission declined with changing naval warfare doctrine and the professionalization of the naval service, the Corps adapted by focusing on formerly secondary missions ashore. The Advanced Base Doctrine of the early 20th century codified their combat duties ashore, outlining the use of Marines in the seizure of bases and other duties on land to support naval campaigns.

Throughout the late 19th and 20th centuries, Marine detachments served aboard Navy cruisers, battleships and aircraft carriers. Marine detachments served in their traditional duties as a ship's landing force, manning the ship's weapons and providing shipboard security. Marine detachments were augmented by members of the ship's company for landing parties, such as in the First Sumatran Expedition of 1832, and continuing in the Caribbean and Mexican campaigns of the early 20th centuries. Marines would develop tactics and techniques of amphibious assault on defended coastlines in time for use in World War II. World War II, Marines continued to serve on capital ships. They often were assigned to man anti-aircraft batteries. When gun cruisers were retired by the 1960s, the remaining Marine detachments were only seen on battleships and

carriers. Its original mission of providing shipboard security finally ended in the 1990s.

### **Capabilities**

U.S. Marines from the 31st Marine Expeditionary Unit training in amphibious warfare during Operation Talisman Sabre at Shoalwater Bay in Australia.

The Marine Corps fulfills a critical military role as an amphibious warfare force. It is capable of asymmetric warfare with conventional, irregular, and hybrid forces.

While the Marine Corps does not employ any unique capabilities, as a force it can rapidly deploy a combined-arms task force to almost anywhere in the world within days. The basic structure for all deployed units is a Marine Air-Ground Task Force (MAGTF) that integrates a ground combat element an aviation combat element and a logistics combat element under a common command element. While the creation of joint commands under the Goldwater–Nichols Act has improved inter-service coordination between each branch, the Corps' ability to permanently maintain integrated multi-element task forces under a single command provides a smoother implementation of combined-arms warfare principles.

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## WHAT IF WE COULD CLEAN WASTEWATER WITH CORN COBS?

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[PRASANT PATIL, 4<sup>TH</sup> SEMESTER, MECHANICAL ENGINEERING]

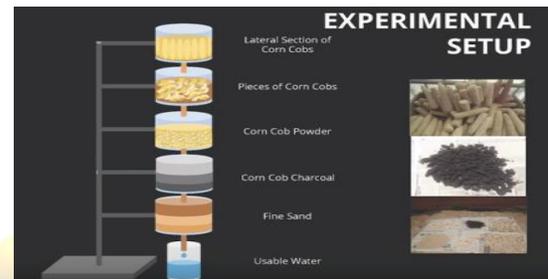
Fifteen-year-old Lalita Prasida was in school when she realized that — in many places around the world — potable water is a luxury. “[In my studies] I found that there’s a lot of impure water around, rather than pure water,” she says at TEDxVienna. “Potable water nowadays is very difficult to get.” Prasida wanted to change that, so she set out to create a new way to purify water.

Prasida, a resident of a rural village in remote India, started her mission after a conversation with a local farmer sparked her imagination. “In one of my encounters with a tribal farmer,” she writes in her description of her project, “I came to know about the low utilization of corn cobs, which ignited me to find out some ways to use this agricultural waste.” She had learned about how bio adsorbents (biological waste like fruit peels eggshells or shrimp shells) can be used to remove contaminants from water and she decided that corn cobs could be the perfect bio adsorbent for her village.

Farmers burned or dumped the inedible cobs, creating environmental pollution and waste that doesn’t biodegrade for a “long, long time,” Prasida says. She wondered if the cob, with its porous structure and durability, could be

just as useful as the carbon or charcoal filters in your average water filtration pitcher.

She set out to find out. She designed a system that uses corn cobs four ways — as longitudinal sections, chunky pieces, powder and charcoal — (plus sand) to filter wastewater in steps.



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## TIME

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[ADWITIYA BHATTACHARYA, 8<sup>TH</sup> SEMESTER, EST]

**Time** is the indefinite continued progress of existence and events that occur in apparently irreversible succession from the past through the present to the future. Time is a component quantity of various measurements used to sequence events, to compare the duration of events or the intervals between them, and to quantify rates of change of quantities in material reality or in the conscious experience. Time is often referred to as a fourth dimension along with three spatial dimensions.

Time has long been an important subject of study in religion, philosophy, and science, but defining it in a manner applicable to all fields without circularity has consistently eluded scholars. Nevertheless, diverse fields such as business, industry, sports, the sciences, and the performing art all incorporate some notion of time into their respective measuring systems.

Two contrasting viewpoints on time divide prominent philosophers. One view is that time is part of the fundamental structure of the universe – a dimension independent of events, in which events occur in sequence. Isaac Newton subscribed to this realist view, and hence it is sometimes referred to as Newtonian time. The opposing view is that *time* does not refer to any kind of "container" that events and objects "move through", nor to any entity that "flows", but that it is instead part of a fundamental intellectual structure (together with space and number) within which humans sequence and compare events. This second view, in the tradition of Gottfried Leibniz and Immanuel Kant, holds that *time* is neither an event nor a thing, and thus is not itself measurable nor can it be travelled.

Time in physics is unambiguously operationally defined as "what a clock reads". See Units of Time. Time is one of the seven fundamental physical quantities in both the International System of Units and International System of Quantities. Time is used to define other quantities – such as velocity – so

defining time in terms of such quantities would result in circularity of definition. definition of time, wherein one says that observing a certain number of repetitions of one or another standard cyclical event (such as the passage of a free-swinging pendulum) constitutes one standard unit such as the second, is highly useful in the conduct of both advanced experiments and everyday affairs of life. The operational definition leaves aside the question whether there is something called time, apart from the counting activity just mentioned, that flows and that can be measured. Investigations of a single continuum called space-time bring questions about space into questions about time, questions that have their roots in the works of early students of natural philosophy. Periodic events and periodic motion have long served as standards for units of time. Examples include the apparent motion of the sun across the sky, the phases of the moon, the swing of a pendulum, and the beat of a heart. Currently, the international unit of time, the second, is defined by measuring the electronic transition frequency of cesium atoms (see below). Time is also of significant social importance, having economic value ("time is money") as well as personal value, due to an awareness of the limited time in each day and in human life spans.

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## PERSONALITY SKILL DEVELOPMENT

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[PARTH PRAJAPATI, 6<sup>TH</sup> SEMESTER,  
CHEMICAL ENGINEERING]

A great overall personality is very important in the life of an individual. Everyone is influenced by an attractive personality. Whether it is an interview for job or having a conversation within your friend circle, there are certain traits and characteristics that you must possess to make you mark and have an impressive conversation. Without influencing others you can't get success in today's competitive world. It is difficult to achieve a job without influencing the interviewers with your personal as well as professional skills, also if you are business you need to influence your clients and make them believe in you. Therefore the importance of personality development has risen very much. These days every good public school is careful about the personality development of its students.

Few years ago the concept of personality development was not very common and parents rarely gave any importance to personality development of their children. In fact personality was just confined to having a good looks and wearing good clothes. Emphasis was given only on physical appearance and expertise in work related skills. Earlier no one paid much attention to develop inter-personal skills. Interview also at those time were concentrated much towards the work efficiency of the person and not much

importance was given to the personality. But now the time has changed. It is an age of competition and economic revolution. Although opportunities of progress are everywhere yet a student has to work very hard to climb the stairs of a brilliant career. The person having a good personality can move through the difficulties with more confidence. However importance of personality development includes:

### **Gives confidence:**

A great personality tends to give a boost to your confidence. When you know you are appropriately attired and groomed, this makes you less anxious when meeting a person. Knowing the right things to say and how to conduct yourself will increase your confidence. If you are in full confidence and well in command of situation then it becomes really easy for you to give out your best performance. Confidence out of your personality gives you a boost that leads to a situation of easiness for you and you are able to control all your anxiety and fears and perform fearlessly. Also your confidence.

Confidence out of your personality gives you a boost that leads to a situation of easiness for you and you are able to control all your anxiety and fears and perform fearlessly. Also your confidence enables you to have a hassle free conversation or if you are going to give a speech it is very important for you to be confident to engage your listeners.

### **Improves communication skills:**

A lot of emphasis is given on improving communication skills during personality development. Possessing good communication skills is very important both for personal and professional life. People are more receptive to what you say if they are impressed with your personality. Verbal communication skills are also part of personality development; improving your speech will strengthen the impact of your message. Also along with your speaking and language skills, a lot of emphasis is laid on improving pronunciation and vocabulary. At the same time effective communication also includes to be a good listener.

### **Helps to develop a positive attitude:**

Positive attitude is really important for one to progress in life. A person with a positive attitude always looks at the brighter side and is always on a developmental path. An individual with a negative attitude finds a problem in every situation. Rather than cribbing and criticizing people around, analyze the whole situation and try to find an appropriate solution for the same. Remember, if there is a problem, there has to be a solution as well. Never lose your cool. It would make the situation worse. Developing a positive attitude even in a hope-less situation is the part of personality developmental program.

### **Makes you credible:**

It is very important to have a proper dressing sense and picking up right dress for you. Despite the saying that you don't judge a book by its cover, people do tend to judge people by their clothing and how it is worn. Also your dress plays a great deal of role in your overall looks and your confidence as well. This does not mean buying expensive clothes will do the whole job. You need to be very careful while picking up clothes for yourself. We all know people who look shabby in expensive clothes. There are also people who look great even if their attire is inexpensive. Because of this, you must know what to wear and you must be aware of other aspects of enhancing your physical features.

### **Improving Personality**

Competition is increasing day by day and there is no less of talented individuals possessing high academic results and willing to work hard to achieve their goals. You cannot win by talent and hard work alone these days apart from these two there is a strong need of good personality too. Personality development is a crucial ingredient for success that you must obtain to be successful in your life. Most of the people you see as models of great personality have taken a lot of effort in developing their natural features. Personality development helps you develop an impressive personality and makes you stand apart from the rest. As discussed earlier personality development also plays an essential role in improving one's

communication skills and focus to be a good listener as well. Individuals ought to master the art of expressing their thoughts and feelings in the most desired way through personality development. Personality development makes you a confident individual who is appreciated and respected wherever he goes. However few tips to improve personality include:

### **Gain knowledge:**

As the saying goes, knowledge is power. It is very true that knowledge is power, and is very important in today's competitive world. Nobody is impressed with a person who doesn't have knowledge about his work as well as surroundings and don't even know what is happening around the world. These days if you are not informed, then you are considered to be a fool whom no wise man or woman would like to befriend or follow. Therefore, it becomes necessary for an individual to enrich their general knowledge, and to master the field in which they are working. It is very important to keep yourself updated with the knowledge of events around the world, you can enhance your knowledge by reading newspaper, watch informative programs on television, news-channels, reading books and magazines and being part of active conversations within your friend circles.

### **A healthy body:**

An important part of personality is your appearance and your physical health. It is very important to

maintain a good physical health for a good personality as well as for a healthy life. A body burdened with disease may get pity of others but it is very difficult for that person to maintain an attractive personality. It is very important to work out regularly and maintain a healthy physique. A healthy and smart look is absolutely essential to create an impact. And if you work on it you can easily attain it. Take exercise regularly, play games or go for a morning walk whatever suits your body and psychology. Eat a balanced diet with fresh fruits and vegetables.

### **Dress smartly:**

As told earlier, physical appearance plays an important role in your personality. A smartly dressed person is admired everywhere. It is not always that only expensive clothes are the best. You should pay a great deal of attention while choosing the right clothing for you ones that suits your physique and you are comfortable in wearing also. By observing successful people in any field, you will come to the conclusion that most of the successful people in almost every field have a keen taste for good dresses. At the same time it is also important that you should not try to copy someone else, instead make a style statement of your own and choose the clothing that you feel comfortable with. Good dresses also prove a stimulus for the wearer, person feels more confident and relaxed.

## Speaking style:

To have an engaging conversation, it is very important that you maintain a good speaking style and expressions as well. Most of the successful persons maintain a unique style in speaking. They speak clearly and forcefully. Be careful that you have a good command on the language you speak. Don't make grammatical mistakes else you may become a laughing stock. If necessary take training from a good teacher. Give extra care to your pronunciation. Speaking power is an essential trait of any good personality. Give others also a chance to speak.

## 5S: A PATH TOWARDS DISCIPLINE AND TIMEY MANAGEMENT

[SAUMYA PANPALIA, 4<sup>TH</sup> SEMESTER, MECHANICAL ENGINEERING]

Firstly question arises what is 5s?

It is a workplace organization method that uses a list of FIVE Japanese words SEIRI, SEITON, SEISO, SEIKETSU, and SHITSUKE. The list describes how to organize a work place efficiently and effective by identifying and storing the items used, maintaining the area and items, and sustaining new orders. In our college (which is 5s certified) we are practicing 5s work. It is distributed among every branch and every class a task of maintenance to keep college neat and clean. As 5s has been implemented the

cleanliness and discipline is also increased. After implementation we don't have to take task of cleaning or looking back for proper arrangement of things, it's just happening by default. After taking overview of 5s and observing its advantages through college, it is implemented by every student, faculty and staff member at even HOME. Before we go further lets have look on word for which 5s means

Meanings of above 5 words are:

1. SEIRI (sort out and dispose) eliminate unnecessary thing. Keep only thing what is needed. Saves money on buying unnecessary additional storage.

As college is having laboratories for electrical and chemical department, it was difficult to identify and know which equipment is useful and we have to use for further studies.

But due to implementation of 5s now no bothering and no need remembering what solution concentration or circuits, wiring is to be dumped.

2. SEITON (place for everything and everything in place) Establish a neat layout to fix storage places and the methods, and stick to the rules. Eliminate search time and strains. Due to 5s the best ever thing happened is anyone can easily FIND, SORT, and MAINTAIN the record of things. In every

class there is place designated to everything like placing of computer table, notice board, order of bench in the class. Most advantage is in the administration cabin where account and staff sits for their work, due to 5s now they can freely work without wasting time for finding things and as it has become habit so every staff member can easily pick the things from other cabin without wasting time on searching. In workshop as there is fix place for every tool, so anybody can come and find out within seconds the place for particular tool.

3. SEISO (scrub, dusting and cleaning) understanding cleanliness form of inspection. It can commensurate to your needs. As main thing is cleanliness of class, laboratories, and workshops (mainly) we can't even imagine of sitting and studying at place which home of dirt. As activity of 5s is there not only cleaning staff but students are also involved in cleaning there sitting place, classroom by knowing it as a part of activity. Particularly dustbin in every lab, GREEN and BLUE dustbins at every single corridor, proper things of cleaning is been provided by college for cleanliness and due to this student by themselves have become aware of cleanliness importance. To clean surrounding nature

every open area and play grounds are covered with saplings of tree on boundaries so it will keep environment safe and air clean.

4. SEIKETSU (standardize the method of 5s) by adding colors and using innovative ideas so that abnormalities show up for early action.
5. SHITSUKE (Self-discipline and training) feeling accountable and setting examples the establishment procedure for orderings and neatness.

#### **Some more benefits of 5s experience at our college**

1. College looks clean and tidy; it feels great in studying at such clean and green environment.
2. At first look everyone appreciates as in Training when companies arrive for job interviews
3. No need of reminding things to be thrown and brought back
4. As everything as name or symbol anyone can easily identify and differentiate things.
5. After some time it become habit in our day to day life or routine to keep things at that particular place where it is assign
6. No need of wasting time in searching
7. 5s gives track if we are wrong or something's is missing or left to be checked
8. For one particular thing searching will not become a issue for anyone at anyplace.

9. When discipline is maintain and no compromise is happing in 5s, even untouched places and waste things is dumped out by ourselves without other help.
10. After sometime it had become so habitual that even knowing and thinking is not the bother it's just happen by itself everywhere.

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### “THE DENIAL OF TRUTH”

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[RUCHIT SHOEMAKER, 4<sup>TH</sup> SEMESTER, (THERMAL ENGG.-PG) MECHANICAL ENGINEERING]

I've noticed this trend among people of all ages and I continue to see it, day in day out. It's something really trivial but psychologically very important: The denial of truth.

To understand this, let's take my example. Though this is only fiction based story. I'm seen as a good student in class, I have good grades and I always score well in the exams. This semester, I neglected studies to some extent for other purposes (projects) and that led to a dip in my class scores. On the day the paper was shown, I was least bothered about what I had scored, but you know how the traditional Indian education system works; if you're a good student, you just can't escape without being asked your marks. A guy came along and asked how much I got and I happily replied without any adulteration. His expressions changed dramatically, as if he hadn't expected that reply coming from me. It was pretty much okay till he

replied in a sarcastic tone "You know I got X, I'm so happy". His score was higher than mine. I somehow controlled myself in the moment and thought "What does this guy want from me? How will telling his marks to me, even benefit him? Does he want me to envy him?" I just said "Very good" and left the scene, not giving a single excuse for my performance. (The guy wasn't even a friend, just an acquaintance.)

What this guy clearly wanted was a burst of excuses as to why I scored less, what I did wrong, i.e., the normal behaviour in such a scenario - denying that he was better than me. His words were a direct hit on my ego of course - he had tried to belittle me; but he failed, only because I accepted that he was better this time. The marks spoke the truth and I had to accept it, no matter how bitter it seemed.

Ego matters a lot because it is what drives you, keeps you confident and makes you feel important. But that doesn't mean driving away the naked truth lying in front of you.

Some of the facts about our ideology that I have noticed from the society:

Grades rule our talents - Even though we are pretty much confident about what all good we can do with our talents, but we choose to run after scoring good grades thereby wasting the former! Most of the time we are placed in a good company depending on our grades and not our talents (in some other fields)

We live for our society and not ourselves - We always do things by considering "*logg kya kahenge* (what society would think of us)" rather than "*hamara kya hoga*" (how it will affect our future)"

Why he and not me? - We'll never grow up comparing each and every other thing with our friends or colleagues or neighbors. Every person has their own field of excellence. If he excels in one maybe you're the one who excels in other in which he's not too good.

You always copy some celebrity - Yes. And that happens with almost everyone. C'mon man I got my own looks, my own personality and I follow my own path but still people will always find out someone from an obscure place on earth and link it with you - "*Tu bilkul iss par gaya hai*" (You are completely like him in all aspects)" Yes, we do take it as a compliment but that actually kills our originality and howsoever creative we do, we are absolutely following him!

You're eligible for everything if you belong to reserved category - Reservations is something that is misused rather than actually being beneficial to the needy. You know nothing? "So what... Who cares? I belong to the reserved category! I rule the world baby! "And he rides away in a BMW and here we having the best talents hardly manage to buy yourselves a motorcycle. The ones who are actually backward gets the least benefits and we find them studying under street lights and going through the worst!

Gender equality is something that we only find in debates - A man slaps a woman, man gets beaten by the crowd for harassment. A woman slaps a man, man gets beaten by the crowd for harassment!

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## “MY REVIEW AND EXPERIENCE AS A TEACHING ASSISTANCE”

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[RUCHIT SHOEMAKER, 4<sup>TH</sup> SEMESTER, (THERMAL ENGG.-PG) MECHANICAL ENGINEERING]

23 July, 2012, I remember the exact date, the day I started my journey for making myself converted into an engineer, a Mechanical Engineer from this beautiful and wonderful place for study.

It was a Monday morning. I reached my destination on time as I am very excited for beginning of my college life. Lots of hustle and bustle in my mind because I don't know any known person in this place as my school friends gets there admission in different colleges.

Having said that, on first day itself, introductory lectures were started of different subjects.

My first lecture for 1<sup>st</sup> semester was of Environmental Studies in Class room No. 1, you guys must be thinking why I am writing this stuffs in my article of teaching experience? How does this stuffs relevance with my article's Title?

So here comes the one sweet and memorable coincidence.

After 5 years, on 14<sup>th</sup> August 2017, I have delivered my debut lecture as a subject teacher of Environmental studies in front of 1<sup>st</sup> semester EST students and that to in a Class room No. 1.

Now you guys can understand why I am going so much detail of particular subject and particular Class room no.

It was obvious, a special feeling and unforgettable moment for me because five years back I had attend my first lecture in this same class and same subject as a student.

So, then onwards I have delivered 80 lectures of Environmental Studies in 3 departments of 1<sup>st</sup> semester.

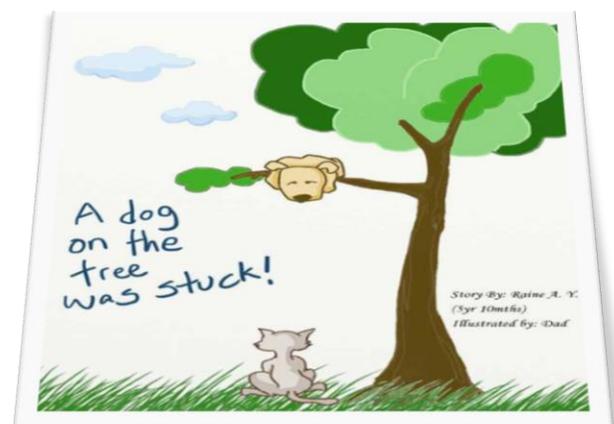
The interesting part is, you came to know about some general things which is very important to know if you are a professor, like How to deal with students while they misbehaving in the middle of lecture, How to present or teach the stuffs which students can't able to understand in first go, How to represent difficult theories in different ways or by giving different examples, so that student can remember and understand those stuffs easily and smoothly.

Also, you came to know about how challenging job is to be as a professor as you have to deal with all the different brains and at the same time you have to make sure that students cannot be bore by your boring theories. So you always have to come

with some relevant practical examples, some funny stuffs which make study and situations lighter for students.

Overall, it was a really great and amazing experience to teach and assist some brilliant minds out there. I have learnt a lot from students too. They were very kind, polite and cooperative. I am extending my thanks to students for their support from 14<sup>th</sup> August to till last lecture and giving me a wonderful and memorable memories of being my 1<sup>st</sup> batch.

Also I am very grateful to this wonderful college and their management for giving me this opportunity.



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## LITERARY ARTICLES: साहित्यिक प्रबन्ध

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SR.NO.	TITLE	CATEGORY
1.	NATURE	POEM
2.	TRUE FRIENDS	POEM
3.	MY SUMMER VACATION	POEM
4.	MOTIVATIONAL THOUGHTS	POEM
5.	THE CAT ON MY ROOF	POEM
6.	POET DIES	POEM
7.	WILL YOU	POEM
8.	DEAR LIFE	POEM
9.	THE MASK	POEM
10.	TRIBUTE TO ROBERT FROST	POEMS
11.	FACE DIFFICULTIES POSITIVELY	SHORT STORY
12.	LET GO OF YOUR STRESSES	SHORT STORY
13.	THE STORY OF A WOODCUTTER	SHORT STORY
14.	THE FROG IN HOT WATER	SHORT STORY
15.	THE WINGS OF FIRE	BOOK REVIEW
16.	THE MATRIX	MOVIE REVIEW

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## NATURE

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[PARTH PRAJAPATI, 6<sup>TH</sup> SEMESTER,  
CHEMICAL ENGINEERING]

Nature is beautiful

Nature is fun

Love it or hate it

Nature is something to love

Nature is god's gift to us

Nature.

Nature we love

Wet and feed nature

Nature water's and feed's us

God gave us nature

We can't live without it

Nature makes us

i know nature

Nature is beautiful

Nature is about the earth

Nature has flower; s and

Weed's or flower's nature is us

NATURE by Kerri king.

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## TRUE FRIENDS

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[NISARGSINH DABHI, 6<sup>TH</sup>  
SEMESTER, CHEMICAL  
ENGINEERING]

True friends are by your side  
through it all.

True friends are there to catch you  
when you fall.

True friends give your life a happy  
lift.

True friends are a most precious  
gift.

True friends will care about you  
forever.

True friends want to be with you on  
every endeavor.

True friends can make you laugh  
and cry.

True friends can be girls or guys.

True friends can get mad at each  
other.

True friends can be your sisters or  
brothers.

True friends will never truly leave  
you.

True friends will love you no matter  
what you do.

True friends really know you but love you anyway.

True friends are those who are always asking you if you're okay.

True friends know that hate is a very strong word.

True friends don't believe every story they've heard.

True friends will tell you the truth, even if it's not what you want to hear.

True friends are always there with a hug and a listening ear.

True friends will tell you things that are true.

True friends will do anything they can to help you.

True friends love to spend time with you.

True friends love to tease you too.

True friends tease all in good fun.

True friends don't care if you've lost or won.

I will love you forever, my friend.

I will stay by your side until the very end.

You'll be in my heart, as I pray for you each day.

You are my truest friend in every way.

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## MY SUMMER VACATION

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[PARTH PRAJAPATI, 6<sup>TH</sup> SEMESTER,  
CHEMICAL ENGINEERING]

A time of fun and joy,

In which I did enjoy,

Learning and games both came,

I treated them the same.

A time of rest and enjoyment,

In which we do give vent,

To our happiness after examinations,

And free up our tensions.

A time needed for students everywhere,

After the heavy wear and tear,  
Of examinations that test their ability,

They are finally free.

A time to pursue hobbies and interests,

To do things in others' behests,

It is a time that all crave for,

And of what students want more.

It is a time to visit family,

Who for long they have not seen,

However, it ends too early,

And then students have to go and study.

It certainly is a boon to students,  
 To be given rest after the  
 examinations,  
 It indeed is time for refreshments,  
 Time for a lot of happiness and fun.  
 Indeed student like this time,  
 In which study is not given a dime,  
 It certainly is filled with lots of festivity,  
 In which children can develop their  
 creativity.  
 Summer Vacations is of course very  
 important,  
 For the children it is indeed and  
 always God-sent.

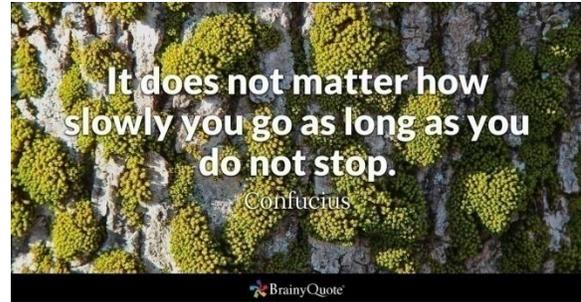
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MOTIVATIONAL  
 THOUGHTS

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[SHRISHAIL CHAUHAN, 4<sup>TH</sup>  
 SEMESTER, MECHANICAL  
 ENGINEERING]  
 Infuse your life with action. Don't  
 wait for it to happen. Make it happen.  
 Make your own future. Make your own  
 own hope. Make your own love. And  
 whatever your beliefs, honor your  
 creator, not by passively waiting for  
 grace to come down from upon high,  
 but by doing what you can to make  
 grace happen... yourself, right now,  
 right down here on Earth.

Bradley\_whitford




---

THE CAT ON MY ROOF

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[SHRISHAIL CHAUHAN, 4<sup>TH</sup>  
 SEMESTER, MECHANICAL  
 ENGINEERING]

*There are two cats sitting on my roof  
 of window,*

*One cat came down and go to  
 meadow.*

*One cat name was Mary,*

*Another cat name was Clary.*

*Clary take a long purr,*

*Mary moves her tail like a radar.*

*Mary observes and catch the food,*

*Clary doesn't observe and start  
 playing with her mood.*

*I am happy that I have two kittens,*

*Clary and Mary started to play with  
 buttons.*

*Mary gets milk at 5 pm,*

*Clary goes outside , watching clouds  
 like dum.*

*Peacock start screaming seeing  
 Mary,*

*Clary frighten when she sees  
 peahen.*

*Mary and Clary gets tired and sleeps  
at night,*

*Mother comes and gives them food of  
might.*

*Both cat sleeps on the roof,*

*Mother takes care from wolf.*

*Same work did cats does on roof for  
longtime,*

*I set on swing and observe there play  
for my mine.*

*Mary sets besides me,*

*Clary sets behind me.*

*I love my both cats,*

*They came home back.*

*One day they leave because of  
storm,*

*I miss them and wish them happy  
journey with there brown paws.*

*I was sad because they had gone,*

*They made me April fool on one first  
dawn.*

---

## POET DIES

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[RUCHIT SHOEMAKER, 4<sup>TH</sup>  
SEMESTER, (THERMAL ENGG.-PG)  
MECHANICAL ENGINEERING]

Time flies,

Hope survives,

Fate declines,

Heart fights

Love fades,

Pain remains,

Memories play,

Scars stay.

Pen bleeds,

Words cry.

Poem lives,

Poet dies.

---

## WILL YOU

---

[RUCHIT SHOEMAKER, 4<sup>TH</sup>  
SEMESTER, (THERMAL ENGG.-PG)  
MECHANICAL ENGINEERING]

Sometimes, I wonder.

Will you find me?

The way I search.

Will you talk to me?

The way I think.

Will you want me?

The way I need.

Will you love me?

The way I write.

Will you trust me?

The way I wish.

Will you try?

The way I wish.

Or will you stay silent?

The way I am.

Sometimes, I wonder.

They were so man, Or were they just us?

Oh life!

I remember everything now. But it doesn't matter how.

What, when, where, who. Nothing matters now.

Because now, Love has arrived!

And now, We will be alive!

---

## “DEAR LIFE”

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[RUCHIT SHOEMAKER, 4<sup>TH</sup>  
SEMESTER, (THERMAL ENGG.-PG)  
MECHANICAL ENGINEERING]

Dear Life,

What happened to us? What went wrong?

Why did we stop feeling? Observing and exploring?

Learning and embracing? Why did we stop living?

Dear Life,

When did I lose you? When did you give up on me?

We learnt to fight together. We promised to stay stronger.

No matter what we shall never give up. We vowed to each other.

Dear Life,

Where is the song lost? The song of joy & smiles. I forgot.

Where is the song lost? The sing of hope & healing. You remember?

Dear Life,

Who broke us? Who took you away from me?

Tell me the names. I don't recall.

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## THE MASK

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[RUCHIT SHOEMAKER, 4<sup>TH</sup>  
SEMESTER, (THERMAL ENGG.-PG)  
MECHANICAL ENGINEERING]

Suffering inside,

Everything to hide,

You say you are fine,

But it's shattering inside.

Everything that matters,

Everyone who is yours.

You wonder what they are,

You question where they are.

I know how you feel,

When the scars don't heal,

Life starts becoming a task,

You start wearing a mask.

The mask that let's the pain stay,

But still you say, I am okay.

The mask that keeps the world away,

While you fight the demons every day.

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TRIBUTE TO "ROBERT FROST"

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[HAMZA SHAIKH, 8<sup>TH</sup> SEMESTER, MECHANICAL ENGINEERING]

### **The Road Not Taken**

Two roads diverged in a yellow wood,  
And sorry I could not travel both  
And be one traveler, long I stood  
And looked down one as far as I could  
To where it bent in the undergrowth;

Then took the other, as just as fair,  
And having perhaps the better claim  
Because it was grassy and wanted wear,

Though as for that the passing there  
Had worn them really about the same,

And both that morning equally lay  
In leaves no step had trodden black.  
Oh, I kept the first for another day!  
Yet knowing how way leads on to way  
I doubted if I should ever come back.

I shall be telling this with a sigh  
Somewhere ages and ages hence:  
Two roads diverged in a wood, and I,  
I took the one less traveled by,  
And that has made all the difference

### **Stopping By Woods On A Snowy Evening**

Whose woods these are I think I know.

His house is in the village, though;  
He will not see me stopping here  
To watch his woods fill up with snow.

My little horse must think it queer  
To stop without a farmhouse near  
Between the woods and frozen lake  
The darkest evening of the year.

He gives his harness bells a shake  
To ask if there is some mistake.  
The only other sound's the sweep  
Of easy wind and downy flake.

The woods are lovely, dark and deep,  
But I have promises to keep,  
And miles to go before I sleep,  
And miles to go before I sleep

### **Fire And Ice**

Some say the world will end in fire,  
Some say in ice.

From what I've tasted of desire

I hold with those who favor fire.

But if it had to perish twice,

I think I know enough of hate

To say that for destruction ice

Is also great

And would suffice.

Nothing Gold Can Stay

Nature's first green is gold,  
Her hardest hue to hold.  
Her early leaf's a flower;  
But only so an hour.  
Then leaf subsides to leaf,  
So Eden sank to grief,  
So dawn goes down to day  
Nothing gold can stay.

#### A Question

A voice said, Look me in the stars  
And tell me truly, men of earth,  
If all the soul-and-body scars  
Were not too much to pay for birth.

#### A Soldier

He is that fallen lance that lies as  
hurled,  
That lies unlifted now, come dew,  
come rust,  
But still lies pointed as it plowed the  
dust.  
If we who sight along it round the  
world,  
See nothing worthy to have been its  
mark,  
It is because like men we look too  
near,  
Forgetting that as fitted to the  
sphere,  
Our missiles always make too short  
an arc.  
They fall, they rip the grass, they  
intersect  
The curve of earth, and striking,  
break their own;  
They make us cringe for metal-point  
on stone.  
But this we know, the obstacle that  
checked  
And tripped the body, shot the spirit

on  
Further than target ever showed or  
shone.

#### A Time To Talk

When a friend calls to me from the  
road  
And slows his horse to a meaning  
walk,  
I don't stand still and look around  
On all the hills I haven't hoed,  
And shout from where I am, What is  
it?  
No, not as there is a time to talk.  
I thrust my hoe in the mellow  
ground,  
Blade-end up and five feet tall,  
And plod: I go up to the stone wall  
For a friendly visit.

#### Acquainted With The Night

I have been one acquainted with the  
night.  
I have walked out in rain - and back  
in rain.  
I have outwalked the furthest city  
light.

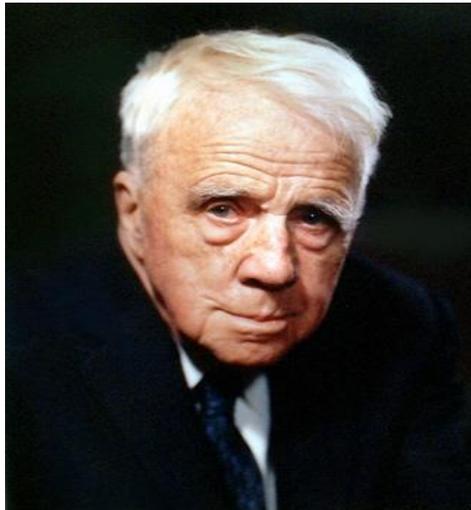
I have looked down the saddest city  
lane.  
I have passed by the watchman on  
his beat  
And dropped my eyes, unwilling to  
explain.

I have stood still and stopped the  
sound of feet  
When far away an interrupted cry  
Came over houses from another  
street,

But not to call me back or say good-

bye;  
And further still at an unearthly height,  
One luminary clock against the sky  
Proclaimed the time was neither  
wrong nor right.  
I have been one acquainted with the  
night.

.....



– Robert Frost

Robert Lee Frost was an American poet. His work was initially published in England before it was published in America

Born: 26 March 1874, San Francisco, California, United States

Died: 29 January 1963, Boston, Massachusetts, United States

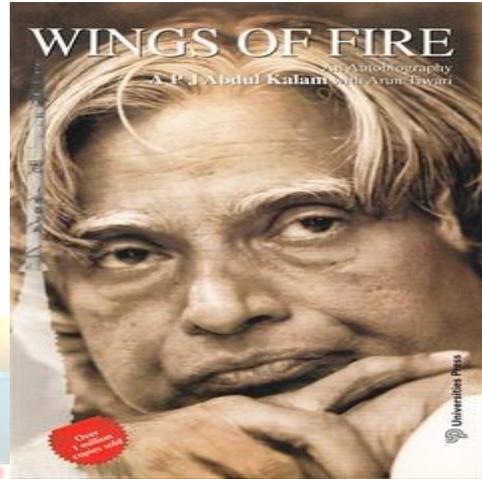
Education: Harvard University (1897–1899)

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## BOOK REVIEW: 'WINGS OF FIRE BY APJ ABDUL KALAM'

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[HAMZA SHAIKH, 8<sup>TH</sup> SEMESTER, MECHANICAL ENGINEERING]



Wings of Fire is an autobiography of APJ Abdul Kalam covering his early life and his work in Indian space research and missile programs. It is the story of a boy from a humble background who went on to become a key player in Indian space research/Indian missile programs and later became the president of India. The book has been very popular in India and has been translated into multiple languages. I recently picked up a copy and read it in a couple of days. It was very engaging initially, but tended to drag a bit towards the end with lot of technical details and procedural information of his space research and missile projects.

I loved the initial chapters of Wings of Fire since it gives a vivid picture of our country during 1930 – 1950s. Kalam was born in Rameswaram, a southern religious town in Tamilnadu. The initial chapters provides an interesting glimpse of religious harmony which existed before India's partition, like

1. *The famous Shiva temple, which made Rameswaram so sacred to pilgrims, was about a ten-minute walk from our house. Our locality was predominantly Muslim, but there were quite a few Hindu families too, living amicably with their Muslim neighbors.*
2. *The high priest of Rameswaram temple, Pakshi Lakshmana Sastry, was a very close friend of my father's. One of the most vivid memories of my early childhood is of the two men, each in his traditional attire, discussing spiritual matters.*
3. *One day when I was in the fifth standard at the Rameswaram Elementary School, a new teacher came to our class. I used to wear a cap which marked me as a Muslim, and I always sat in the front row next to Ramanadha Sastry, who wore a sacred thread. The new teacher could not stomach a Hindu priest's son sitting with a Muslim boy. In accordance with our social ranking as the new teacher saw it, I was asked to go and sit on the back bench. I felt very sad, and so did Ramanadha Sastry. He looked utterly downcast as I*

*shifted to my seat in the last row. The image of him weeping when I shifted to the last row left a lasting impression on me. After school, we went home and told our respective parents about the incident.*

4. *Lakshmana Sastry summoned the teacher, and in our presence, told the teacher that he should not spread the poison of social inequality and communal intolerance in the minds of innocent children. He bluntly asked the teacher to either apologize or quit the school and the island. Not only did the teacher regret his behaviour, but the strong sense of conviction Lakshmana Sastry conveyed ultimately reformed this young teacher.*

Kalam in younger years wanted to be an officer in air force, however he couldn't clear the interview. He met Swami Sivananda after this failure and I found his words to Kalam interesting and in a way prophetic,

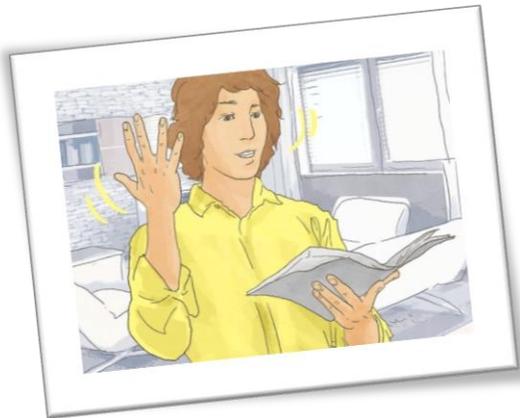
*"Accept your destiny and go ahead with your life. You are not destined to become an Air Force pilot. What you are destined to become is not revealed now but it is predetermined. Forget this failure, as it was essential to lead you to your destined path. Search, instead, for the true purpose of your existence. Become one with yourself, my son! Surrender yourself to the wish of God"*

The book covers a lot of "behind the scene" information and technical details about India's satellite and

missile program (SLV-3, Prithvi, Agni, Thirusul, Akash and Nag). This might interest technically inclined readers but is sure to put off readers who bought the book to get to know Kalam or to know his principles/ideas. Space and missile programs are huge complex projects and managing them is extremely challenging. The book does give a glimpse of the participatory management technique adopted by Kalam, but at the same time it doesn't go into details.

Wings of fire covers Kalam's personal life only briefly which is strange for an autobiography. For example, we don't know why he decided to remain single or his activities outside space research (even though we can conclude in the end that he was married to science and technology).

Kalam is a poet and is a huge fan of poems. The book contains many of his own poems and his favorite poems.



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## “MOVIE REVIEW: THE MATRIX (1999)”

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[HAMZA SHAIKH, 8<sup>TH</sup> SEMESTER, MECHANICAL ENGINEERING]

"The Matrix" is a visually dazzling cyber adventure, full of kinetic excitement, but it retreats to formula just when it's getting interesting. It's kind of a letdown when a movie begins by redefining the nature of reality, and ends with a shoot-out. We want a leap of the imagination, not one of those obligatory climaxes with automatic weapons fire.

I've seen dozens if not hundreds of these exercises in violence, which recycle the same tired ideas: Bad guys fire thousands of rounds, but are unable to hit the good guy. Then it's down to the final showdown between good and evil--a martial arts battle in which the good guy gets pounded until he's almost dead, before he finds the inner will to fight back. Been there, seen that (although rarely done this well).

Too bad, because the set-up is intriguing. "The Matrix" recycles the premises of "Dark City" and "Strange Days," turns up the heat and the volume, and borrows the gravity-defying choreography of Hong Kong action movies. It's fun, but it could have been more. The directors are Larry and Andy Wachowski, who know how to make movies (their first film, "Bound," made my 10 best list in 1996). Here, with a big budget and veteran action producer Joel Silver, they've played it safer; there's

nothing wrong with going for the Friday night action market, but you can aim higher and still do business.

Warning; spoilers ahead. The plot involves Neo (Keanu Reeves), a mild-mannered software author by day, a feared hacker by night. He's recruited by a cell of cyber-rebels, led by the profound Morpheus (Laurence Fishbone) and the leather-clad warrior Trinity (Carrie-Anne Moss). They've made a fundamental discovery about the world: It doesn't exist. It's actually a form of Virtual Reality, designed to lull us into lives of blind obedience to the "system." We obediently go to our crummy jobs every day, little realizing, as Morpheus tells Neo, that "Matrix is the wool that has been pulled over your eyes--that you are a slave." The rebels want to crack the framework that holds the Matrix in place, and free mankind. Morpheus believes Neo is the Messianic "One" who can lead this rebellion, which requires mind power as much as physical strength. Arrayed against them are the Agents, who look like Blues Brothers. The movie's battles take place in Virtual Reality; the heroes' minds are plugged into the combat. (You can still get killed, though: "The body cannot live without the mind"). "Jacking in" like this was a concept in "Strange Days" and has also been suggested in novels by William Gibson ("Idoru") and others. The notion that the world is an artificial construction, designed by outsiders to deceive and use humans, is straight out of "Dark City." Both of

those movies, however, explored their implications as the best science fiction often does. "Dark City" was fascinated by the Strangers who had a poignant dilemma: They were dying aliens who hoped to learn from human methods of adaptation and survival.

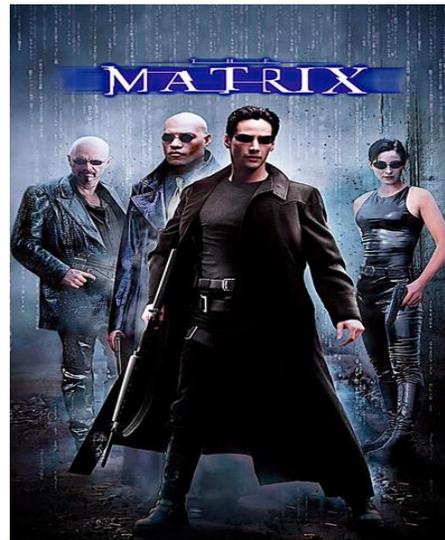
In "Matrix," on the other hand, there aren't flesh-and-blood creatures behind the illusion--only a computer program that can think, and learn. The Agents function primarily as opponents in a high-stakes computer game. The movie offers no clear explanation of why the Matrix-making program went to all that trouble. Of course, for a program, running is its own reward but an intelligent program might bring terrifying logic to its decisions.

Both "Dark City" and "Strange Days" offered intriguing motivations for villainy. "Matrix" is more like a superhero comic book in which the fate of the world comes down to a titanic fist-fight between the designated representatives of good and evil. It's cruel, really, to put tantalizing ideas on the table and then ask the audience to be satisfied with a shoot-out and a martial arts duel. Let's assume Neo wins. What happens then to the billions who have just been "unplugged" from the Matrix? Do they still have jobs? Homes? Identities? All we get is an enigmatic voice-over exhortation at the movie's end. The paradox is that the Matrix world apparently resembles in every respect the pre-Matrix world. (I am reminded of the

animated kid's film "Doug's 1st Movie," which has a VR experience in which everything is exactly like in real life, except more expensive.) Still, I must not ignore the movie's virtues. It's great-looking, both in its design and in the kinetic energy that powers it. It uses flawlessly integrated special effects and animation to visualize regions of cyberspace. It creates fearsome creatures, including mechanical octopi. It morphs bodies with the abandon of "Terminator II." It uses f/x to allow Neo and Trinity to run horizontally on walls, and hang in the air long enough to deliver karate kicks. It has leaps through space, thrilling sequences involving fights on rooftops, helicopter rescues and battles over mind control.

And it has performances that find the right notes. Keanu Reeves goes for the impassive Harrison Ford approach, "acting" as little as possible. I suppose that's the right idea. Laurence Fishbone finds a balance between action hero and Zen master. Carrie-Anne Moss, as Trinity, has a sensational title sequence, before the movie recalls that she's a woman and shuttles her into support mode. Hugo Weaving, as the chief Agent, uses a flat, menacing tone that reminded me of Tommy Lee Jones in passive-aggressive overdrive. There's a well-acted scene involving Gloria Foster as the Oracle,

who like all Oracles is maddeningly enigmatic.



"The Matrix" did not bore me. It interested me so much, indeed, that I wanted to be challenged even more. I wanted it to follow its material to audacious conclusions, to arrive not simply at victory, but at revelation.



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# OMNISCIENT (OFFBEAT FACTS)

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[PARTH PRAJAPATI, 6<sup>TH</sup> SEMESTER,  
CHEMICAL ENGG DEPARTMENT]

## 1. The Bigger, The Better!

After Rajasthan, Madhya Pradesh is the second largest state in India by area. With an area of 308,000 sq. km, it occupies a strategic geographical location in India.

## 2. The Capital Shifts!

After India's independence, Madhya Pradesh was formed with Nagpur as its capital. However, in 1956 the state was reorganized and Bhopal became its new capital.

## 3. Home to Khajuraho: A World Heritage Site!

Built back in the 10th century, the Khajuraho monuments are an epitome of breath-taking sculptures and elegance. The sculptures depict the artful and erotic expressions of the various sexual practices of the time. These clusters of sculptures have been classified as the world heritage sites, which attract hundreds and thousands of people every day.

## 4. The Oldest Known Rock Art!

The Caves of Bhimbetka is a collection of 600 caves and is considered one of the oldest cave collections in India. It is another hotspot for tourists for some of its amazing rock carvings and paintings.

The site is known as the oldest known rock art in the Indian sub-continent as well as one of the largest prehistoric complexes. These caves are also a world heritage site in India.

## 5. Home to The Kumbh-Fair!

The City of Ujjain in Madhya Pradesh is known as 'The City of Temples' because it's home to some of India's most popular temples. Ujjain is also one of the four places where the Kumbh-Mela is hosted. It is held on the banks of the river Shipra where the event is celebrated in a grand manner with lip-smacking street foods.

## 6. Wildlife in Bandhavgarh!

Bandhavgarh is home to some of the exotic wildlife creatures that are difficult to spot in other parts of India. The most famous ones are white tigers besides for the wide variety of birds, mammals, butterflies, and reptiles. Bandhavgarh had also been the hunting ground for the ancient Kings. Bandhavgarh has also mythological significance as it is believed that the ancient Bandhavgarh Fort was gifted by Lord Rama to his younger brother Lakshmana.

## 7. Birthplace of Legends!

Madhya Pradesh has been home to numerous famous personalities.

Freedom fighter – Chandra Shekhar Azad, children rights activist – Kailash Satyarthi, singers like Kishore Kumar and Lata Mangeshkar, actor Arjun Rampal, actress Jaya Bachchan (Bhaduri) and cricketers like Mansoor Ali Khan Pataudi, Amay Khurasia, and Narendra Hirwani among many others.

### **8. Treasure Trove of Minerals!**

Coal and iron ore are important minerals found in Madhya Pradesh. The place like Balaghat is famous for bauxite, copper, manganese, and dolomite. Panna is the most famous diamond mine, while Betul and Chhatarpur are known for fireclay, china clay, and coal reserves.

### **9. India's Largest Tribal Groups!**

Madhya Pradesh is considered as the state with the largest strength of tribals in India. The main tribal groups are Gond, Bhil, Baiga, Korku, Bhadia, Kaul, Malto and Sahariya. Districts like Dhar, Jhabua, and Mandla consists of more than 50 percent of tribal population.

### **10. The Charismatic Marble Rocks!**

Situated at the Bhedaghat, marble rocks are an area along the Narmada river near the city of Jabalpur in Madhya Pradesh. It is a popular tourist spot because of the marble rock the river has carved out. It is a picturesque scenario with rocks situated in about 8km length of the gorge. The marbles are mined and transported all over India.

### **11. The Jungle Book Connection!**

The Kanha National Park is one of the biggest national parks in Madhya Pradesh. Did you know the famous novel 'Jungle Book' by Rudyard Kipling draws its inspiration from the forests Pench Tiger Reserve and Kanha National Park?

### **12. The Historic City of Gwalior!**

Gwalior is known to be the tourist center of Madhya Pradesh. This city is surrounded by historic monuments, forts, museums to take you back in the bygone of history. The shopping hub, Patankar Bazaar is popular for handicrafts, artificial jewelry, painted wall hangings, and dolls, etc.

### **13. The Elegance of a Silken Touch!**

Since the 11th century, the exquisite hand-woven Chanderi sarees adorn the historic town of Chanderi in Madhya Pradesh. The Chanderi Sarees are also adorned around the globe for the artistry behind their creation.

### **14. Be Enlightened At Sanchi!**

Home to Buddhist Stupas, the town of Sanchi is synonymous with the Buddhist Philosophy. The Stupas of Sanchi were constructed on the orders of Emperor Ashoka the Great, and since then, these Stupas have been safeguarding ancient history and art of the Mauryan period.

### **15. Travel Back In Time!**

Founded by the Bundela Rajput Chief, Rudra Pratap in the 16th century, the town of Orchha seems frozen in time as its most of the monuments have retained their original grandeur even to this day. When you visit Orchha, it's like traveling back in time!

### **16. Board a Ship That Never Sailed!**

Bearing a silent witness to Mandu's long, rich and varied history, Jahaz Mahal in Mandu is a jewel built somewhere around 1436-1439. It stood floating over the twin lakes- Munj Talao and Kapur Talao that makes Jahaz Mahal look as if it's floating.

### **17. Queen of Satpura!**

Discovered by Captain James Forsyth in 1857, Pachmarhi is Madhya Pradesh's only hill station that offers a refreshing escape from steamy central India. Situated at 1100 m, Pachmarhi is popularly known as 'Satpura ki Rani' (Queen of Satpura).

### **18. Host to India's Largest Water Carnival!**

Close to Khandwa district in Madhya Pradesh, and in the backwaters of Indira Sagar Dam on River Narmada, lies an island named Hanuwantiya. Every year, Hanuwantiya hosts India's only and largest water

carnival, Jal Mahotsav, which is India's one of its kind water festivals.

### Reference

<http://ohfact.com/interesting-facts-about-Madhyapradesh/>



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## NOBLE NOBELS

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[AASTHA PAREKH, 6<sup>TH</sup> SEMESTER,  
EST]



Ishiguro is considered one of the most celebrated contemporary fiction authors in the English-speaking world, having received four Man Booker Prize nominations and winning the 1989 award for his novel *The Remains of the Day*. His 2005 novel, *Never Let Me Go*, was named by Time as the best novel of 2005 and included in its list of the 100 best English-language novels from 1923 to 2005. His seventh novel, *The Buried Giant*, was published in 2015. Growing up in a Japanese family in the UK was crucial to his writing, as he says, enabling him to see things from a different perspective from many of his British peers.

In 2017, the Swedish Academy awarded Ishiguro the Nobel Prize in Literature, describing him in its citation as a writer "who, in novels of great emotional force, has uncovered the abyss beneath our illusory sense of connection with the world".

**BORN:** 8 Nov. 1954

Nagasaki, Japan

**Notable awards:** Winifred Holtby Memorial Prize(1982)

Whitbread Prize(1986)

Booker Prize(1989)

Order of the British Empire(1995)

Noble Prize Literature(2017)

**OCCUPATION:** Novelist

Short Story Writer

Screen Writer

Columnist

Song Writer

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## ART CORNER: चित्र-लेख

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[AKSHITA SHAH, 6<sup>TH</sup> SEMESTER, EST]



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## SETU ALUMNI ASSOCIATION

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[TEAM SETU]



The Alumni Association SETU is a dynamic, member focused organization driven by value oriented objectives and directed towards social, intellectual and spiritual needs of all present and future alumni's of SRICT.

Established in 2015, the association strengthens ties between alumni with alma mater providing opportunities of cooperation and communication for a lifelong relationship. The mission to cover by the association is to promote SRICT's pride and its excellence through and to alumni's as an insight to the exterior environment. The working of the association has been smooth and friendly towards both section because of the dedicated executives and the boards working.

**Board of Association:**

**Vice Chairman ARES:** Rtn. Ashok Panjwani

**Faculty Mentor / Vice Principal:** Dr. Snehal Lokhandwala

**President:** Tejas Chauhan

**Vice President:** Vineet Mangroliya

**Treasurer:** Bhupesh Thakur

**Secretary:** Snehal Prajapati

**Executive:** Vedant Danak

**Executive:** Vivek Agarwal

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## KNOW OUR FACULTY: गुरुं-विजानियात्

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**Name:** Mehta Bhasha  
Chandreshbhai

**Qualification:**

M.E. (Environmental Management)  
B.E. (Environmental Engineering)

**Experience:**

- 1 year of industrial experience as an Environmental Engineer which includes 6 months of experience in RTML MNC Company, Vapi and 6 months in Envision Enviro Technologies Pvt. Ltd. Surat before M.E.
- 3 months of experience as an Environmental Engineer in Environmental Management Inc. in Ahmedabad after M.E.
- Currently working as an Assistant Professor in Environmental Science and Technology Department in SRICT.



**Name of Faculty:** Chetan Ramanlal  
Patel

**Designation:** Assistant Professor

**Department:** Mechanical  
Engineering

**Educational Qualification:**

M.E. in Thermal Engineering from  
Gujarat Technological University  
B. E. in Mechanical Engineering from  
South Gujarat University

**Experience:** Teaching experience of  
5 year and 10 months.

**Hobbies:** Playing, Travelling, Racing,  
Reading.

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## KNOW OUR STAFFS': सिकाययकतायम्जाहियात

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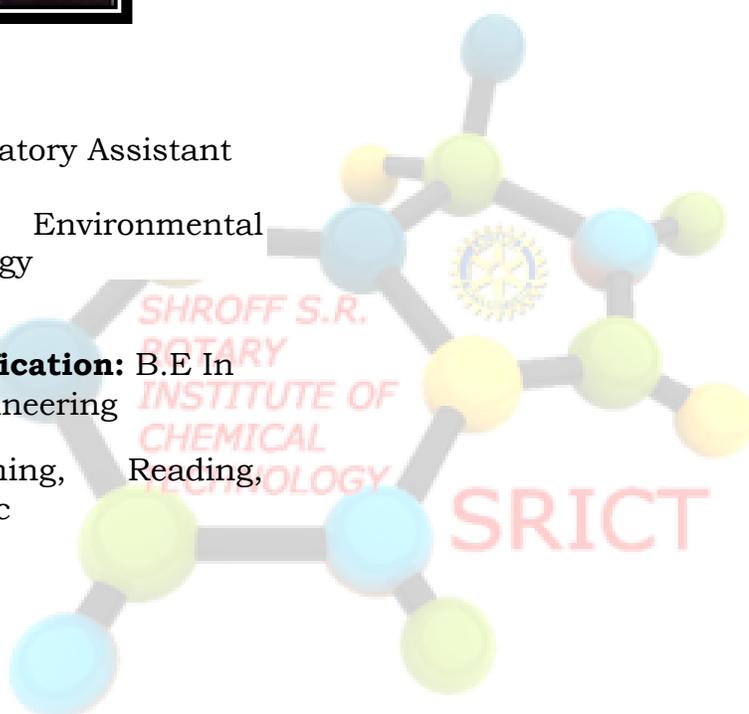
**Name:** Vicky Kokni

**Designation:** Laboratory Assistant

**Department:** Environmental  
sciencee & technology

**Educational Qualification:** B.E In  
Environmental Engineering

**Hobbies:** Swimming, Reading,  
listening Slow Music



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## OBITUARY

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[PARTH PRAJAPATI, 6<sup>TH</sup> SEMESTER,  
CHEMICAL ENGINEERING]

### Stephen Hawking



Stephen William Hawking CH CBE FRS FRSA was an English theoretical physicist, cosmologist, author, and director of research at the Centre for Theoretical Cosmology at the University of Cambridge.

**Born:** 8 January 1942

**Died:** 14 March 2018

#### **Education:**

Hawking was born on 8 January 1942. Hawking began his schooling at the Byron House School in Highgate, London. He later blamed its "progressive methods" for his failure to learn to read while at the school. In St Albans, the eight-year-old

Hawking attended St Albans High School for Girls for a few months. At that time, younger boys could attend one of the houses.



Hawking began his university education at University College, Oxford, Hawking estimated that he studied about 1,000 hours during his three years at Oxford. These unimpressive study habits made sitting his finals a challenge and he decided to answer only theoretical physics questions rather than those requiring factual knowledge. A first-class honors degree was a condition of acceptance for his planned graduate study in cosmology at the University of Cambridge. After receiving a first-class BA (Hones.) degree in natural science and completing a trip to Iran with a friend, he began his graduate work at Trinity Hall, Cambridge, in October 1962. Hawking received a

research fellowship at Gonville and Caius College at Cambridge. He obtained his PhD degree in applied mathematics and theoretical physics, specializing in general relativity and cosmology, in March 1966; and his essay "Singularities and the Geometry of Space-Time" shared top honors with one by Penrose to win that year's prestigious Adams Prize.

### Career:

In his work, and in collaboration with Penrose, Hawking extended the singularity theorem concepts first explored in his doctoral thesis. In 1970, Hawking postulated what became known as the second law of black hole dynamics that the event horizon of a black hole can never get smaller. With James M. Bardeen and Brandon Carter, he proposed the

four laws of black hole mechanics, drawing an analogy with thermodynamics. Beginning in 1973, Hawking moved into the study of quantum gravity and quantum mechanics. Hawking was elected a Fellow of the Royal Society (FRS) in 1974, a few weeks after the announcement of Hawking radiation. At the time, he was one of the youngest scientists to become a Fellow.



In 1975, he was awarded both the Eddington Medal and the Pius XI Gold Medal, and in 1976 the Dannie Heinemann Prize, the Maxwell Prize and the Hughes Medal. These awards did not significantly change Hawking's financial status, and motivated by the need to finance his children's education and home expenses, he decided in 1982 to write a popular book about the universe that would be accessible to the general public.

Instead of publishing with an academic press, he signed a contract with Bantam Books, a mass market publisher, and received a large advance for his book. A first draft of the book, called *A Brief History of Time*, was completed in 1984. One of the first messages Hawking produced with his speech-generating device was a request for his assistant to help him finish writing *A Brief History of Time*. The book was translated into many languages and ultimately sold an estimated 9 million copies.

Hawking pursued his work in physics: in 1993 he co-edited a book on Euclidean quantum gravity with Gary Gibbons and published a collected edition of his own articles on black holes and the Big Bang.

**Personal life:**



When Hawking was a graduate student at Cambridge, his relationship with Jane Wilde, a friend of his sister whom he had met shortly before his late 1963 diagnosis with motor neuron disease, continued to develop. The couple became engaged in October 1964. Hawking later said that the engagement gave him "something to live for and the two were married on 14 July 1965."

Children: Lucy Hawking, Robert Hawking, Timothy Hawking.

**Disability:**

Hawking had a rare early-onset slow-progressing form of motor neuron disease (also known as amyotrophic lateral sclerosis, "ALS", or Lou Gehrig's disease), that gradually paralyzed him over the decades. Hawking was fiercely independent and unwilling to accept help or make concessions for his disabilities. By 2009 he could no longer drive his

wheelchair independently, but the same people who created his new typing mechanics were working on a method to drive his chair using movements made by his chin. This proved difficult, since Hawking could not move his neck, and trials showed that while he could indeed drive the chair, the movement was sporadic and jumpy.



On 26 April 2007, Hawking flew aboard a specially-modified Boeing 727-200 jet operated by Zero-G Corp off the coast of Florida to experience weightlessness. Fears the maneuvers would cause him undue discomfort proved groundless, and the flight was extended to eight parabolic arcs. It was described as a successful test to see if he could withstand the g-forces involved in space flight. At the time, the date of Hawking's trip to space was projected to be as early as 2009, but commercial flights to space did not commence before his death.

## Death:

Hawking died in his home in Cambridge, England, early in the morning of 14 March 2018, at the age of 76.



Hawking was born on the 300th anniversary of Galileo's death and died on the 139th anniversary of Einstein's birth. He directed at least fifteen years before his death that the Bekenstein–Hawking entropy equation be his epitaph.

## Award:

Adams Prize (1966)

Maxwell Medal and Prize (1976)

Albert Einstein Award (1978)

RAS Gold Medal (1985)

Dirac Medal (1987)

Prince of Asturias Award (1989)

Andrew Gemant Award (1998)

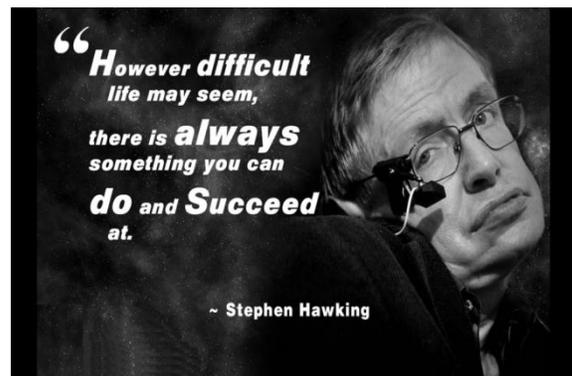
Lilienfeld Prize (1999)

Copley Medal (2006)

Presidential Medal of Freedom (2009)

Breakthrough Prize in Fundamental Physics (2012)

BBVA Foundation Frontiers of Knowledge Award (2015)



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## ☺ JOKES ☺

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[PARTH PRAJAPATI, 6<sup>TH</sup> SEMESTER,  
CHEMICAL ENGG DEPARTMENT]



Two factory workers talking:

Woman: "I can make the boss give me the day off."

Man: "And how would you do that?"

Woman: "Just wait and see." She then hangs upside-down from the ceiling.

Boss comes in: "What are you doing?"

Woman: "I'm a light bulb."

Boss: "You've been working so much that you've gone crazy. I think you need to take the day off."

The man starts to follow her and the boss says: "Where are you going?"

The man says: "I'm going home, too. I can't work in the dark."



Physics Teacher: "Isaac Newton was sitting under a tree when an apple fell on his head and he discovered gravity. Isn't that wonderful?"

Student: "Yes sir, if he had been sitting in class looking at books like us, he wouldn't have discovered anything."

A man talking to God:

The man: "God, how long is a million years?"

God: "To me, it's about a minute."

The man: "God, how much is a million dollars?"

God: "To me it's a penny."

The man: "God, may I have a penny?"

God: "Wait a minute."



A little girl came home from school and said to her mother, "Mommy, today in school I was punished for something that I didn't do."

The mother exclaimed, "But that's terrible! I'm going to have a talk with your teacher about this ... by the way, what was it that you didn't do?"

The little girl replied, "My homework."



The students were lined up in the cafeteria for lunch. At the head of the table was a large pile of apples. The nun made a note, and posted on the

apple tray: "Take only ONE. God is watching."

Moving further along the lunch line, at the other end of the table was a large pile of chocolate chip cookies. A child had written a note, "Take all you want. God is watching the apples."



Teacher: "If you had one dollar and you asked your father for another, how many dollars would you have?"

Vincent: "One dollar."

Teacher: "You don't know your arithmetic."

Vincent: "You don't know my father."



A man asks a farmer near a field, "Sorry sir, would you mind if I crossed your field instead of going around it? You see, I have to catch the 4:23 train."

The farmer says, "Sure, go right ahead. And if my bull sees you, you'll even catch the 4:11 one."

A w    psychiatrist  
abc husband is  
acting so weird. He drinks his  
morning coffee and then he goes and  
eats the mug! He only leaves the  
handle!"

Psychiatrist: "Yes, that is weird. The handle is the best part."



Boy to his friend: "I've always thought my neighbors were quite nice people. But then they put a password on their Wi-Fi."



<http://www.shortfunny.com>

Reference

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## NEWS-NATIONAL AND INTERNATIONAL

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[SAUMYA PANPALIA, 4<sup>TH</sup> SEMESTER  
MECHANICAL ENGINEERING]

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### “NATIONAL NEWS”

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1. Avani Chaturvedi, First Indian Woman Pilot To Fly Fighter Jet MiG-21 Bison



Flying Officer [Avani Chaturvedi](#) scripted history by becoming the first Indian woman fighter pilot to fly solo. Ms. Chaturvedi on Monday flew a MiG-21 Bison, which has the highest landing and take-off speed in the world. This was her first training solo sortie and she flew it for 30 minutes in Gujarat's Jamnagar airbase, an Indian Air Force official said.

2. Sridevi passes away at 54 after a cardiac arrest in Dubai



The actor, wife of producer Boney Kapoor, died late in the night reportedly due to cardiac arrest in Dubai, where she had gone along with her family to attend her nephew Mohit Marwah's wedding.

3. CBSE question paper leak of class 10 maths and class 12 economics

Important CBSE announcements:

- No leak of CBSE papers outside India, hence no re-exam will be held abroad
- CBSE Class X Mathematics examination likely to be held in July
- Class XII Economics re-exam on April 25: Education Secretary

"This decision to hold Class 12 examination is in context, nature, and consequences of the examination of Class 12 examination. As I mentioned

earlier, children have to go to the University to seek admission they have to appear in various examinations. Most importantly there is no time for a detailed inquiry where exactly the leak happened," said Anil Swarup. "Our immediate concern of the children who have suffered and this decision is in that context. We will nail the person who did this," Anil Swarup added. "For Class 10 Maths, the examination will take place if it is found that the leaks had been in Delhi and Haryana. The decision will be only for Delhi and Haryana for rest of the states no re-examination will happen," Anil Swarup said.

4. GSLV-F08 (communication satellite) carries into space on Saturday by ISRO



**GSLV-F08** is the 12<sup>th</sup> flight of Geosynchronous Satellite Launch Vehicle (GSLV) and Sixth flight with indigenous Cryogenic Stage. The Launch of GSLV-F08 carrying GSAT-6A took place from the Second Launch Pad (SLP) in Satish

Dhawan Space Centre SHAR, Sriharikota

**GSLV -F08 / GSAT-6A** Mission was launched on Thursday, **March 29, 2018** at **16:56 Hrs (IST)**.

5. Somdev Devvarman into top 100 list of ATP -rankings



India's rising tennis star Somdev Devvarman on Monday became only the second Indian after Leander Paes to break into the top-100 of ATP rankings, reaching a career-high 96th in the latest list issued today. Somdev reached his maiden ATP Tour event finals in last year's Chennai Open, beating more established players like Carlos Moya of Spain and Ivo Karlovic of Croatia in the process. Somdev also reached the ATP Tour quarterfinal of the South African Open in Johannesburg the same year before leading India's singles challenge in the Davis Cup tie against Russia. Somdev qualified for this year's French Open and went down fighting against Switzerland's Marco Chiudinelli 6-3, 3-6, 6-3, 3-6, 6-3 in the first round.

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## “INTERNATIONAL NEWS”

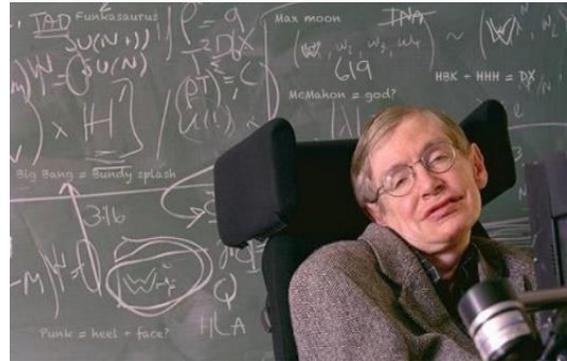
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### 1. SOPHIA, the first robot in the world to be given citizenship



- JUST one month after she became the world's first robot to be granted citizenship of a country, Sophia has said that she would like to start a family.
- Sophia, a humanoid robot created by Hong Kong company Hanson Robotics, made history after being granted citizenship in Saudi Arabia in October.
- In a recent interview with *The Khaleej Times* Sophia said that family is a “really important thing” and even commented that if she had a robot daughter, she would name it Sophia, after herself, adding that she believes robots also deserve to have a family.

### 2. Stephen Hawking passed away at age of 76.



The brilliant British theoretical physicist who overcame a debilitating disease to publish wildly popular books probing the mysteries of the universe, has died, according to a family spokesman. He was 76. Considered by many to be the world's greatest living scientist, Hawking was also a cosmologist, astronomer, mathematician and author of numerous books including the landmark "A Brief History of Time," which has sold more than 10 million copies.. Hawking also discovered that black holes were not completely black but emit radiation and would likely eventually evaporate and disappear.

### 3. Captain Smith and David Warner caught ball tempering



Smith and former vice-captain David Warner were handed 12-month bans and batsman Cameron Bancroft was suspended for nine months by CA after the latter was caught using a piece of sandpaper on the ball in the third Test in Cape Town.

Cricket Australia have banned Smith and David Warner from all international and domestic cricket for a year, while opening batsman Cameron Bancroft was exiled for nine months over attempted cheating during the third Test in South Africa.

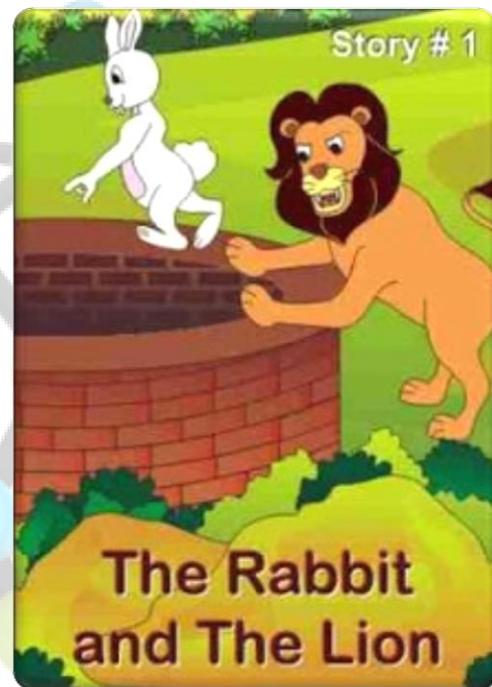
#### 4. NASA to Launch Supersonic Parachute Test off Virginia Coast March 27



The rocket carried the payload as high as about 32 miles (51 kilometers). Forty-two seconds later, at an altitude of 26 miles (42 kilometers) and a velocity of 1.8 times the speed of sound, the test conditions were met and the Mars parachute successfully deployed.

Thirty-five minutes after launch, ASPIRE splashed down in the

Atlantic Ocean about 34 miles (54kilometers) southeast of Wallops Island.



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## “MESSAGE FOR COMMITTEE MEMBERS: HAMZA SHAIKH AND SHREYA SHAH”

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This is a message from me, Mansi Kasundra to my editorial companion Hamza Shaikh and Shreya Shah for your enthusiastic and dedicated efforts in Kathan. Yours' has been constant support for all the years in the editorial team. The drafts that you had prepared, the people that you handled, the guidance that you gave to the team members, was all what we needed. The Kathan team will always remember for the contribution that you gave us. From the day you handled responsibility to the day you are leaving this work, the team has seen your constant efforts. I always had pleasure working under you. Bidding you an adieu.



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## READERS WRITE

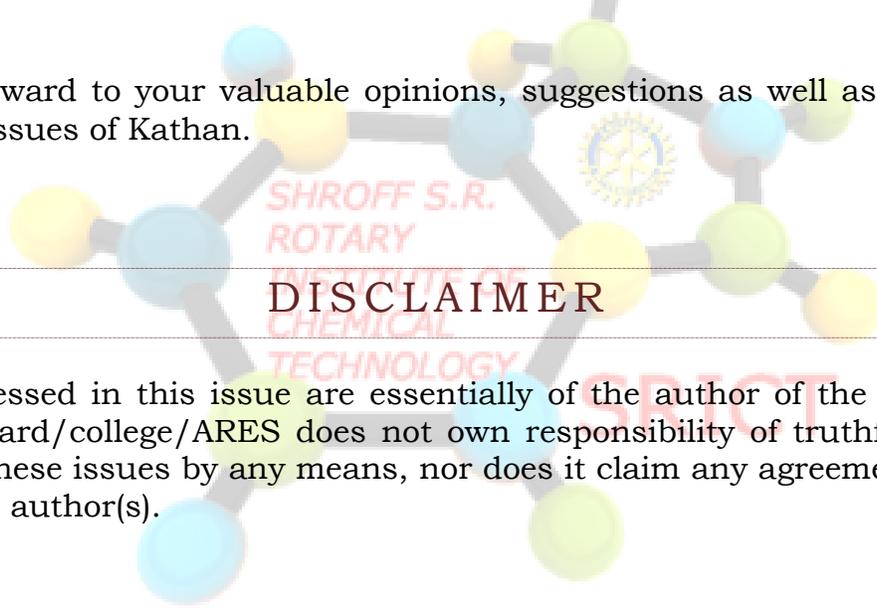
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Any reader can give his/her opinion, suggestions and also put forward any technical articles related to our streams and current areas of industrial development in technical section; any literary articles, or general articles appealing to all readers of Kathan.

Articles of the utmost interest will be selected by the editorial board.

We will not be responsible for any kind of copyright issues, and plagiarism is strongly discouraged from the members of editorial board. Templates for submitting articles can be availed by sending us an email. We are reachable at [kathan@sriect.in](mailto:kathan@sriect.in)

We look forward to your valuable opinions, suggestions as well as articles for upcoming issues of Kathan.



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