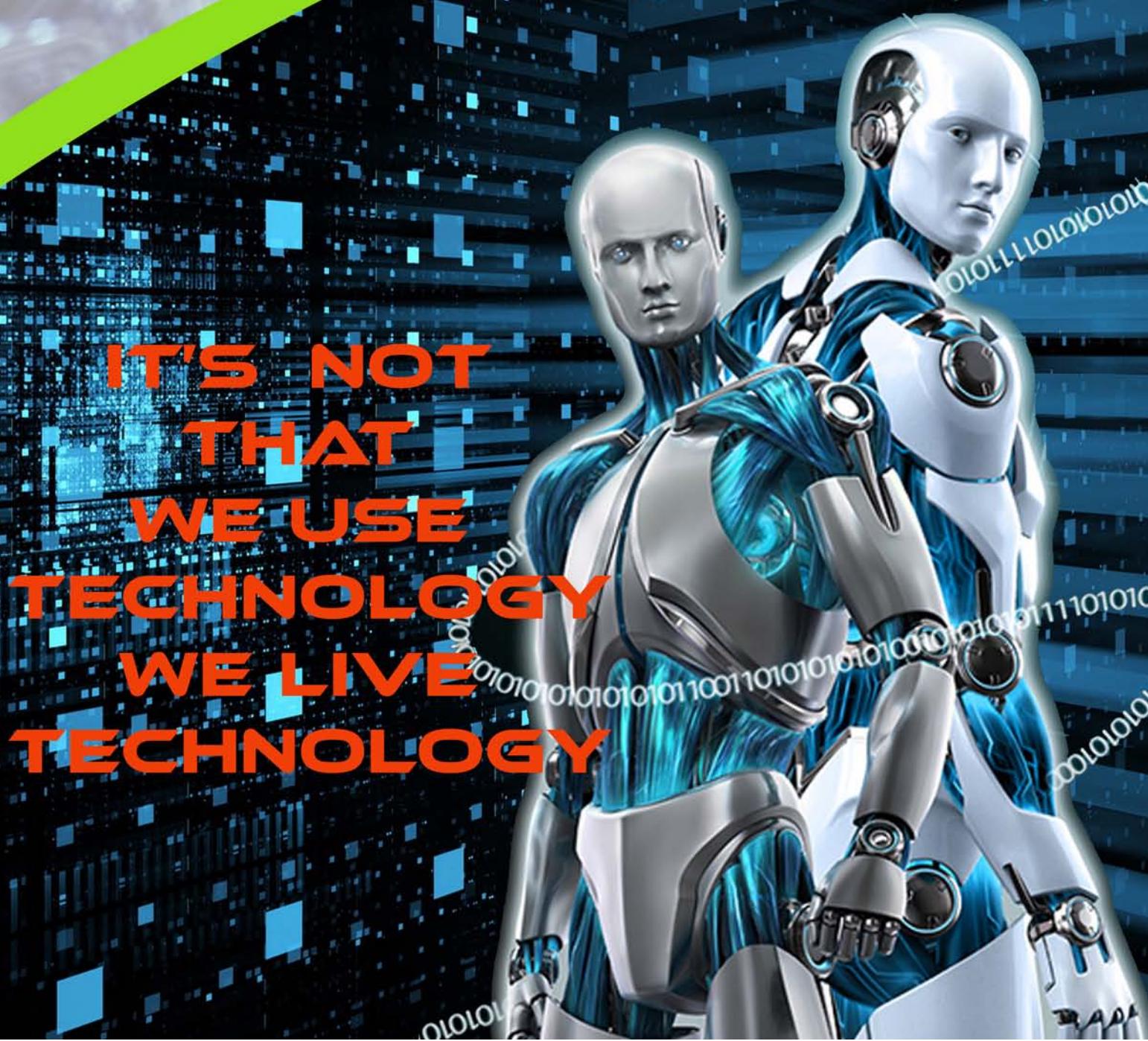


instronica 1.0



IT'S NOT
THAT
WE USE
TECHNOLOGY
WE LIVE
TECHNOLOGY

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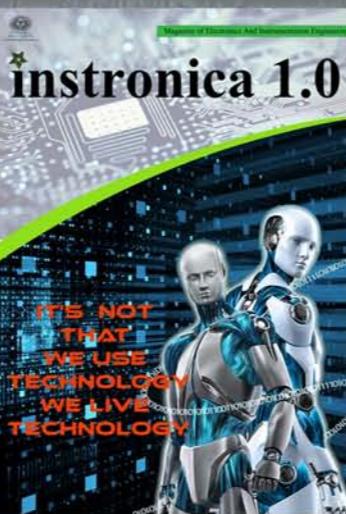
SCADA System

Student suicides :why in india??

Photography
Painting
Sketch

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Message from the Head of the Department

I take this as an honor and also a moment to express my immune pleasure in addressing the future stalwarts, in the first publication of "INSTRONICA" for the department of Electronics and Instrumentation Engineering of National Institute of Technology Agartala. Irrespective of department, the teachers and students give their daily reciprocation of ideas and thoughts makes an Institution achieve the highest order of nobility. I believe my teachers in their diligent deliberation of lecture to the students are not only imbibing the mind of the students with knowledge of limiting nature that also preparing them for the great cause of nation building. My dear students, I appreciate your dutiful nature and effort you give in preparing yourself for the future. In this first edition of magazine I would like to mention that this Institution apart from making you professionally ready but also enable you to culture deeper interest in other field of our vast and rapidly growing country. It will make the runners of this Institute filled with pride when yours endeavor shine through and also will be an inspiration to the coming generation. In developing society like our faced with severe constraint, I would like you to be the element of social change, economic progress and human welfare. Life is an ongoing process of learning and unlearning, so when you tread into the real world you being the captain sale you ship to wining the horizon responsibility.

In my concluding word, I would say as the great Swami Vivekananda has put it- weakness of any form is a disability and disease and to shunt it, I too also ask you, the students, to bravely face all forms of weakness and walk the way with a lifted spirit.

Best wishes to all my students and teachers with all your great endeavors.

With regards

Dr. Jayanta Kumar Rakshit
HOD of EIE

**CREATIVE
POWER**



Editorial

This is 1st edition of 'INSTRONICA' that is 'INSTRONICA 1.0'. It contains viewpoints, creation and thoughts of our friends seniors and teachers. We take this for you to show skills of our teachers, seniors and friends. We have tried our best to make sure that memories of our super seniors help us to recapitulating their eventful journey in EIE branch and NITA. We begin the introduction to the 1st issue of our branch magazine with a huge thanks to all who submitted their articles to be publish and make possible to publish this edition. We are inviting contributes from those who wish to note a significant event and with idea about the technology and creativity.



*Editor In Chief
Amit Kasana*

OUR TEAM

Faculty Advisor

Mrs. Priyanka Roy Goswami

Editor In Chief

Amit Kasana

Co-Editor

Vijay Kumar Meena

Team Member

ASHISH KANOJIA

DHEERAJ KUMAR VERMA

NIDHI





The Institute was established in 1965 as Tripura Engineering College, with the three traditional branches of civil, electrical, and mechanical. It was initially affiliated with Calcutta University.



After the establishment of Tripura University on October 2, 1987 the state's first institution of higher education, It was on October 2, the birth date of Mahatma Gandhi, that Tripura University formally came into being ,the Institute was affiliated with it. Courses toward a degree in computer science and engineering were offered beginning in the 1999 – 2000 session, and three new degrees were offered beginning in the 2005 – 2006 session: Electrical & Electronics, Production and Transportation Engineering. It was felt that these offerings catered to the technical needs of the students in this region



The department of Electronics and Instrumentation Engineering has been set up in the academic year of 2009-10 with sanctioned intake capacity of 60(sixty) students in the undergraduate level. The B.Tech degree for the first batch of students was awarded in 2013.



On 23 February 2006, the Union Cabinet approved the proposal of the state government for conversion of Tripura Engineering College to National Institute of Technology, a fully Central Government funded Institution with Deemed to be University status. It also became a National Centre of Excellence.



LUCK COMES BY CHANCE; SUCCESS COMES BY CHOICE

CHOICE

Every person has ups and downs throughout his/her life, your success is followed by failure or the other way around and you cannot be always at the top or always at the bottom. Aiming at being successful, people are so eager that they often seem to forget who they are and where they come from. They change their way of thinking in a bad way, become indifferent, heartless and devoid of emotions. On the way to success everyone has to make a choice – whether to manage to preserve themselves, their iden-

tity and principles, or to degrade in moral and emotional way while gaining success at any cost. Luck is success or failure apparently brought by chance rather than through one's own actions. In our lives, we can take chances apparently which can be our luck, but to allocate our success we need to incorporate the right choice. No doubt we can increase our luck to succeed by involving ourselves through a series of tasks. Setting our intentions will direct us to establish where we are going to make the path of our lifelong plan. The difficult task is

LUCK

HARD WORK

to open our eyes to get the clear visibility so that we can concentrate and focus in order to reciprocate our luck. Taking a chance in life is the hardest part of creating your serendipity. Even if we make a mistake when we take a chance, if we handle ourselves professionally and with high integrity, no decision is a bad one. The key idea is to become a learning machine. Every situation we get into, take a mental note about what we did great or what we could do better. Because over time, we will build a library of experiences from which we have to pull out information to help us with our next experience. The more experiences we will have in our library, the better decisions we will be able to make. Change is the constant of time, so does our lives. It is not imprinted by a single goal, but with a chain of goals which we develop a plan to create our serendipity, we will take ownership of our career. This is a living, breathing process, and it will evolve as we evolve.

Achieving success in life isn't just about in-

telligence, competence or experience. The key to beat our competition and succeeding is the 'winning attitude.' Success begins with adopting the RIGHT attitude. And positive attitude puts you in the right mindset for winning. No matter how difficult of a task we face, having a positive mental attitude will help us to cope with challenges and prepare ourselves to successfully accomplish our goals. It's all about the right attitude. When life presents its numerous challenges, we begin to lose faith in our abilities. It is then that positive attitude helps us navigate all the difficulties and face the challenges boldly. It makes us better equipped to overcome the odds and puts us back on the road to success. The power of a positive attitude is within our reach. We simply have to make a choice and grab it. The attitude we choose to adopt will determine the course of our life. Everyone desires success and has ample potential to make it big and the real task arise when we have to make the choice-RIGHT or BAD!

01



HAPPY REPUBLIC DAY JAI HIND !!!

(Tick Tack- notification in my smart phone)

Mrs. Priyanka Roy Goswami
Assistant Professor



The social media buzzes with various colours, words and the spirit of Republic Day. Indeed, it a day glorifying it to any length, still leaves infinitely immense room for celebration. Celebration of the most acclaimed word glossarily acknowledges the supremacy of people in a state.

FB, Titter, Instagram, Flickr eulogizing the Republic Day, reminds me an

02



intriguingly named article ‘Instant Democracy’ by Ms Shobha De as it reared in my thought that we all have become ‘Instant Patriots’. In some cases super patriots!!! Vivacious display of gloss and glam unfolds a chain of thoughts which is too far from being picturesque. The thoughts are evoked by the unglam picture of everyday difficulties, muddles and issues presented as a buffet on several aspects in dailies and news channels. What causes perturbation??? It is the huge gap in the image projected by the different medias as if two distant worlds, one unknowing of the existence of the other. One busking in the soft sunshine and the other gripped in the claws of poverty, illiteracy, female foeticide, discrimination , domestic violence, unemployment andsuicide!!!!.

While penning down this, the constant episode playing in the backdrop of mind was you all, the students. Association with an institution of learning and reciprocity with some of the bright minds of the country

03



on also makes the job of writing the article hard as inception of any idea into the reading minds should reflect responsibility. Apart from daily Signals & Systems, Digital Electronics, DSP and all through this platform provided by the ‘Magazine’ .I would want to steer the bright minds for embracing a cause for life long.Which has crippled the all-round growth of our country.

Yes, at present job is the priority and

fades away the glitz parfaits depicted depicted about the celebration.

Without sounding verbose. I believe ,we can. we can make a cause apart of our life and play our role in alleviating hindrances of our fellow brothers as may have been imagined and expected in the past dewing the framing of our constitution that the future people will do. The phone ringscalls about

along with it as life progresses comes responsibility of cars, credit cards, insurances, family, extended families and the list is an.....But still is it too hard to pursue one love for a cause for next 40 years of our life ??? Mmm.....many eyebrows are raised! For choices we have an infinite list, to make the country a better place to live in. But interpretation of this should never be taken as talking about self-denial or austerity.

In the 67th Republic Day, we the youth –the people –the future can adopt a cause and nourish it daily and although out our lives like one of our “Love” as our mothers’ do by watering the potted plants in our balcony, however small it may be and the whole house rejoicing when the first bud appears.

The constitution of India guides the entire gamete of actions, initiatives and ideals of our country. The preamble to the constitution is the essence of the constitution which in its original form had the word ‘republic’ in it. Among the several inferences the word ‘republic’ provides, one may be that the people of the country will strive to the best of their efforts in building the nation and create an enabling environment for the people

themselves of present & future. Presently ,starting from the struggle of getting basic amenities like healthcare, literacy, housing, old age homes, orphanages, information dissemination, gender discrimination, pending court cause, pollution, security are among the many causes which at their slightest appearances in a snapshot

04



the syllabus, important questions keeps on coming mind cares to do for the fellow citizens will be a great appreciation of the effort someday.

As said by Shakespeare that we are here to play our role and back- we will be past someday, so we shall give our future, the present is who is thoughtful and not defeating the purpose of our gifted life. Or else at the autumn of our life we will be saying as JB says.....”I am sorry”

Transformer Isolation



Miss Aparupa Kar
Assistant Professor

Introduction:-

Electrical isolation is necessary to protect circuits, equipment, and people from shocks and short circuits as well as to make accurate measurements. Isolation, also referred to as galvanic isolation, means no direct conduction path exists for the current to flow; no physical connection exists. Isolation can be accomplished using electromagnetic, capacitive, or optical devices. While physically and electrically isolating the circuitry from unwanted currents, required signals and power need to be transferred across the separated circuits. To transfer signals, transformers use

magnetic flux, capacitive isolators use differential voltage and optocouplers use light to bridge the gap. This article discusses the use of isolation transformers.

Why Isolation?

Isolation transformers are used to –

- protect users from faulty equipment
- enable safe and accurate measurements
- avoid ground loops
- physically separate one part of an electrical system from another

“ Electrical isolation is necessary to protect circuits, equipment, and people from shocks and short circuits. ”

Isolation Transformer Construction:-

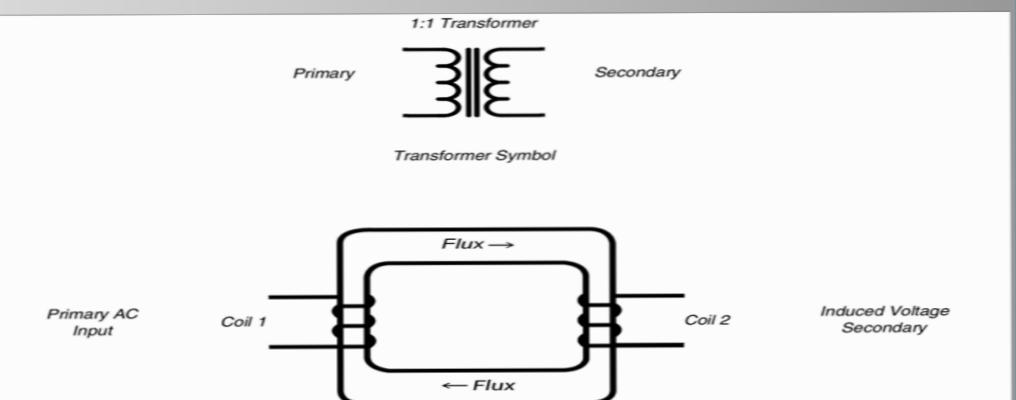
Transformers can be described as two coils surrounding a core of ferromagnetic material, as shown in Figure :-

The schematic representation shows the primary and secondary coils; the electric source is connected to the primary, the isolated output is taken from the secondary. The coils are physically separate from each other and the core. Michael Faraday first used an early transformer during his experiments investigating electromagnetism. Faraday found that a wire carrying a current induces a magnetic field surrounding the wire and that when two separate wires were coiled around a toroid of soft iron, a current in one induced a magnetic field, and the changing flux in turn induced a voltage in the other. Now known as mutual induction, Faraday is credited with discovering that an electromotive force is induced in a circuit by a changing magnetic flux according to the formula:-

$$E = -d\Phi B/dt$$

Sometimes this is shown using the absolute value of E:

$$|E| = d\Phi B/dt$$



The negative sign indicating the electromotive force opposes the current.

Because Faraday was working with DC voltage, he only saw the effect of electromagnetic induction when a battery was initially connected or disconnected to the circuits, when the

magnetic flux was changing. With AC power connected to the primary, the varying current creates a varying magnetic field, the magnetic flux is realized in the core, and that in turn induces a voltage in the secondary, with no electrical path between the two coils. The inductive coupling provided by the changing magnetic flux between the two coils allows communication across transformer. The magnetic field induced by a transformer depends on the number of turns/unit length of the windings, the permittivity of the magnetic core, and the current magnitude.

Although any transformer consisting of two separate coils and no grounding shields provide isolation, the term isolation transformer applies to transformers especially designed for the purpose of providing electrical isolation; whose primary purpose is to isolate an AC source from circuits, devices and equipment. The design of an isolation transformer takes into account anything that may couple the primary and secondary windings. They often have special insulation between the primary and secondary coils, and are specified to withstand high voltage between windings. Because power line/transient voltage noise can be coupled thru the capacitance and

blocked by the transformer as well as interference caused by ground loops. For sensitive equipment (computers or measuring instruments) electrostatic shields are included to reduce any capacitance between the windings.

Isolation transformers used for safety usually have a turns ratio of 1:1, with the number turns in the primary and secondary windings equal, but step-up and step-down isolation transformers are used when the voltage also needs to be changed. When choosing an isolation transformer, check the specs for the features included, the ratings and how they are constructed.

Special Purpose Isolation Transformers:-

Isolation transformers have been developed for specialized applications. Some examples are: Pulse transformers: optimized for transmitting rectangular electrical pulses and provide electrical isolation for digital signals. These are used in computer networks. Austin transformers: invented by Arthur O. Austin, these power the air-traffic obstacle lamps you see on an antenna structures. If not isolated, the lighting circuitry on the antenna mast would conduct radio-frequency energy to ground. These transformers also completely isolate the building AC mains from the tower. Instrument transformers: to supply precise voltage for meters and are used to safely isolate control circuitry from high voltages/

currents.

“Some transformers are made with only one winding which is tapped at different places on the winding to divide it into primary and secondary portions. Known as auto-transformers, these devices do not provide isolation, as the single winding is shared. Isolation transformers have separate coils, with no physical connection between the coils, no earth ground.”

Safety Always:-

Isolation transformers make working on AC equipment safer and can protect against unintentionally introducing shorts in the circuit. Working on the principle of mutual induction, they are used to break ground loops and remove unintended current paths where accidental contact could cause problems. When choosing an isolation transformer, select one with appropriate ratings and specs for your requirements.

The isolated circuit is still a live circuit! When using an isolation transformer, whether powering the unit under test or an oscilloscope or other equipment, knowing the ground(s) in use; checking voltages and current in your work area and your circuit, following all safety measures, are still required!



INSTRUMENTATION

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SHAILENDRA KUMAR SINGH
13UEI043



Instrumentation is the use of measuring instruments to monitor & control a process. It is the art of science of measurement & control of process variables within a production, laboratory or manufacturing area.

An instrument is a device that measures a physical quantity such as flow temp, level, distance, angle or pressure etc. Instruments may be as simple as direct reading thermometers or may be complex multi-variable process analysers. Instruments are often part of a control system in refineries factories & vehicles. The control of applied instrumentation. Instrumentation can also refer to hand held devices that measure some desired variable. Diverse hand held instrumentation is common in laboratories, but can be trend in the house as well. Instrumentation technology program, prepare, students for careers installing maintaining and repairing control equipment used in a variety of industries. Many professionals in this field design and test electrical.

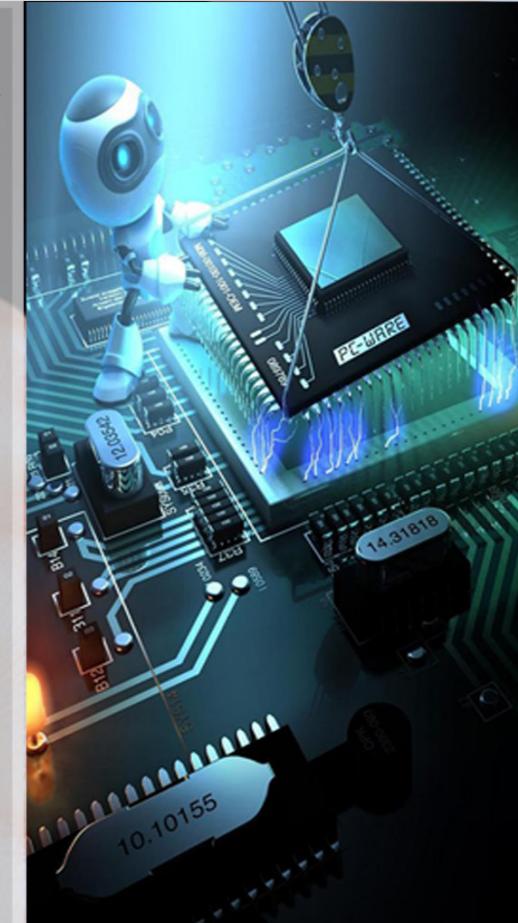
This field design and test electrical equipment for use in communication, medicine or navigation. Others manufacture industrial products & machinery. Regardless to the industry they work in. These technicians are generally employed to ensure. That products & economically. Instrumentation engineering is the engineering focused on the principle & operation to measuring instruments that are used in design and configuration of automates systems in electrical pneumatic domain etc. They typically work for industries with automation processes, such as chemical or manufacturing plants, with the goal of improving systems productivity, reliability, safety, optimization & stability. Their ultimate aim is to control the parameters of a system & for this devices such as microprocessor, microcontrollers or PLCs are used.

In addition to measuring field parameters, instrumentation is also responsible for providing the ability to modify some field parameters. That means the instrument is not only for measuring purpose, but also for changing and modification of the process system. Over time, instruments have become more accurate & precise.

A scientific instruments is an instrument used for scientific purpose. They may be specifically designed construction & refined for the purpose scientific instruments are of laboratory experiment. But are considered more sophisticated & more specialized than other measuring instruments as scales, meter sticks thermometers or even wave form generation the integration of computers to improve & simplify control, enhance and extend instrumental functions, conditions, parameters adjustment & data sampling collection, resolution, analysis (both during and post process) storage & retrieval.

All measurements have the potential for decisions & control measurement instruments have three traditional classes of use:
- monitoring of processes & operation, control of processes & operation experimental engineering analysis.

Control instrumentation plays a significant role in both gathering information from the field and changing the field. Parameters, and as such area a key part of control loops. Instruments attached to a control system systems may provide signals used to operate solenoids. Values, regulation, circuit breakers or relays. These devices control a desired output variable and provide either remote or automated control capabilities. These are often referred to as final control elements when controlled remotely or by a control system.



Lack of Instru- mentation Graduates or Stuff in them?

PROBLEM
IS
?
?

In the field of Instrumentation Engineering, the current scenario depicts a pool of opportunities. But, these are being utilized by the wrong set of people. Should we think it is the inability of ourselves to grab them or it is the ability of others to avail these opportunities? How many of us know this branch of Engineering when we were in 12th grade? How many of us have the slightest knowledge regarding Instrumentation right now?

THAT
RESULTS
IN.
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I don't think it is the capability of others branch candidates that is pulling Instrumentation Industries towards them but it is due to lack of human resources with right set of skills in our Department. Most of the Companies which are having Instrumentation as one of their field of work are hiring other branch candidates for the positions of Instrumentation Engineers.

BECAUSE
OF
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What if we have Communication faculty or any other faculty to teach the core subjects of Instrumentation? What would you expect the outcome to be?

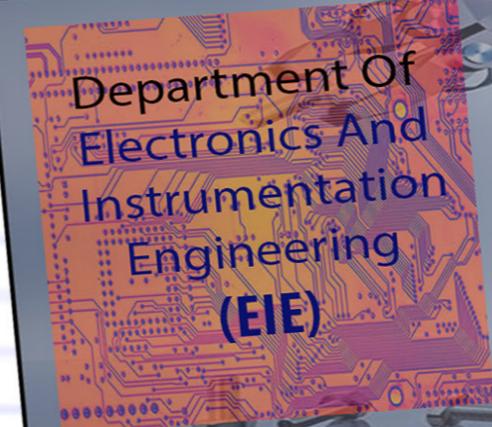
SO
WE
HAVE
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As most of IITs, NITs and other prominent Engineering colleges lack the branch of Instrumentation Engineering, it is necessary to create awareness among the available set of human resources to meet the present Industrial needs.

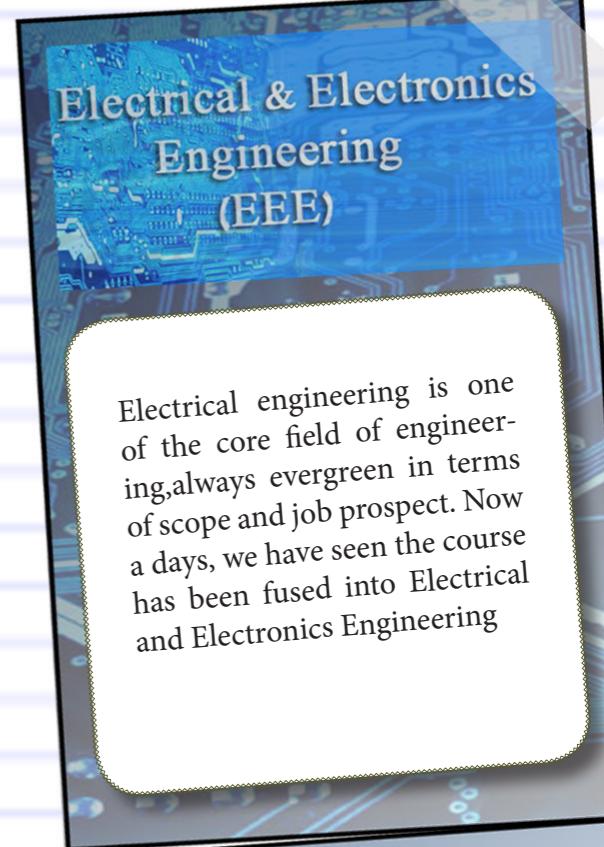
Rather than the retrospection of past errors, students right now pursuing under graduation in Instrumentation Engineering should focus in improving their skill set to scale the Industrial purposes.



Electronics and communication engineering is the utilization of science and math applied to practice problems in the field of communication. Communication Engineers engage in research, design, development and testing of the electronic equipment used in communication system.



EIE (Electronics and instrumentation) Engineering is a specialized branch of Electrical and electronics engineering, primarily focusing on the principle and operation of measuring instruments used in design and configuration of automated system. Instrumentation technology helps create, construct and maintain measuring and control devices and system found in manufacturing plants and research institutions.



Electrical engineering is one of the core field of engineering, always evergreen in terms of scope and job prospect. Now a days, we have seen the course has been fused into Electrical and Electronics Engineering

Why EIE is less preferred? Why should one chose EIE?

Most people doesn't consider instrumentation as a "core" subject, if ever there is something called "core" Engineering. It is cohort of the most ill-informed parents. EIE is not liked very much because everyone try get into ECE/EEE/CSE/Mech. Just because previous batch got into those field. Besides, most info is word-of-mouth, which may be reliable (or) not reliable.

As for scope, no other course offers flexibility as such as EIE. In the words of B.G.Iptak, who puts it subtly, "ours is a very young profession. It is partly for this reason that while people know what kind of engineer an ME(or) a ChE is ,they have no idea what I do when I say that my field is instrumentation. I just get a blank stare. While as profession we have been anonymous, we have already designed fully automated mars Explorers and fully optimized plants. After all no engineering profession can claim what we can. We can increase productivity without using a single pound of additional raw materials and without requiring additional amount of energy .

Inside SCADA Systems:-

A SCADA (supervisory control and data acquisition) is an automation control system that is used in industries such as energy, oil and gas, water, power, and many more. The system has a centralized system that monitors and controls entire sites, ranging from an industrial plant to a complex of plants across the country. A SCADA system works by operating with signals that communicate via channels to provide the user with remote controls of any equipment in a given system. It also implements a distributed database, or tag database, that contains tags or points throughout the plant. These points represent a single input or output value that is monitored or controlled by the SCADA system in the centralized control room. The points are stored in the distributed database as value-time-stamp pairs. It's very common to set up the SCADA systems to also acquire metadata, such as programmable logic controller (PLC) register paths and alarm statistics.

The HMI processes data from each tag and sends it to a human operator, where he or she then can monitor or control the system. The supervisory system gathers the data sent from each tag and sends commands or operations to the process. The RTUs connect sensors and convert their signals to digital data and send it to the supervisory system, where it can be stored in a distributed database. PLCs are used as field devices because they are much more versatile and economical than process-specific RTUs. Finally, the communication infrastructure delivers connectivity to the supervisory system and then to the RTUs and PLCs for the user to command. The communication infrastructure is necessary to relay data from remote RTU/PLCs, which run along electric grids, water supplies, and pipelines. Communication is the absolute most essential link for a SCADA system to operate properly; however, how well the system manages communication from HMI to RTUs and PLCs fundamentally determines how successful a SCADA system can be.

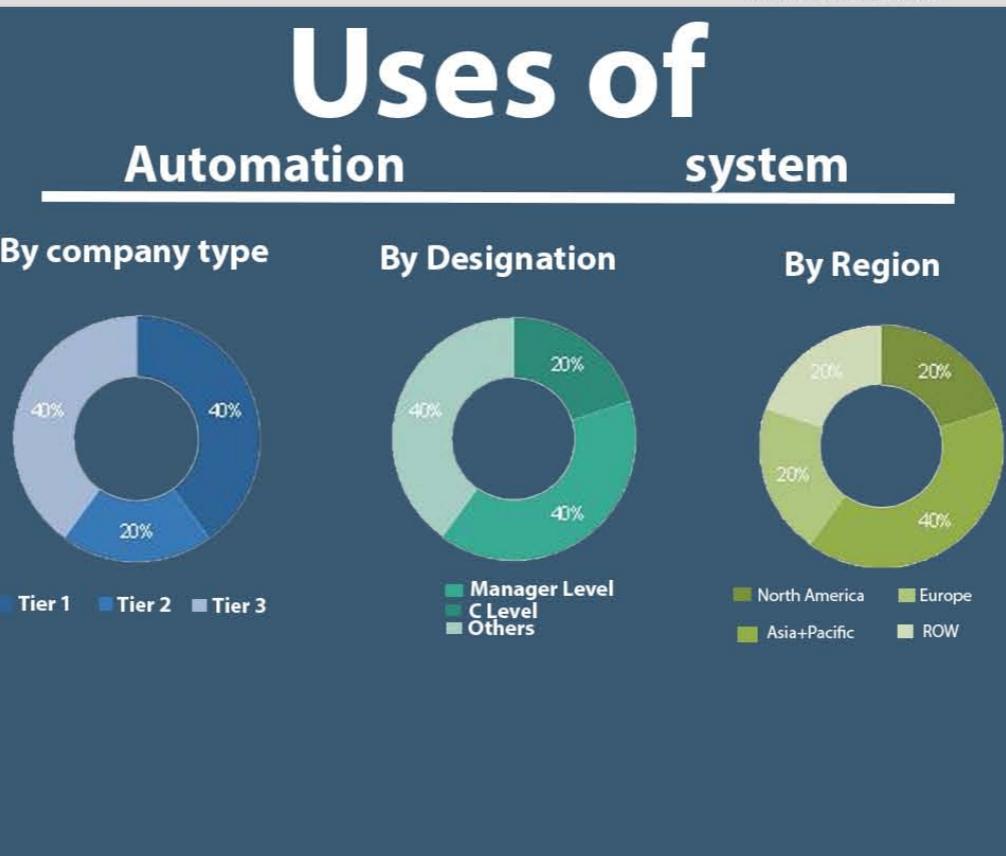
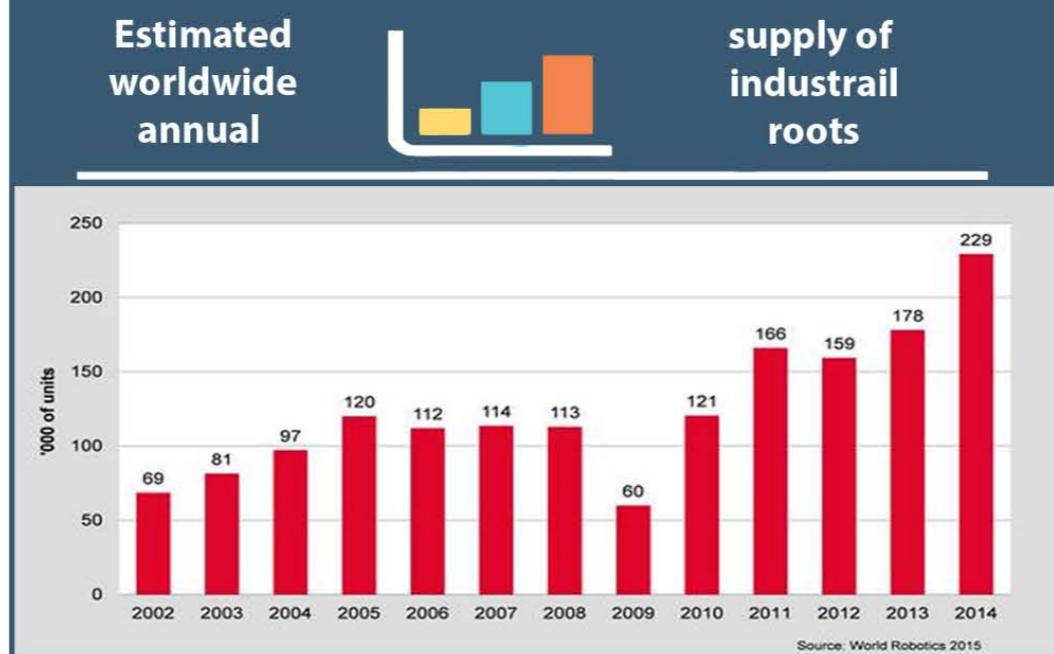
While these systems simplify a given infrastructure, their components are quite complex. There are five essential composing parts of a SCADA system:



- Human Machine Interface (HMI) supervisory system
- Remote Terminal Units (RTUs)
- Programmable Logic Controllers (PLCs)
- communication infrastructures

Optimizing Performance:-

While many power, electric, and water companies still use manual labor to perform measurements and adjustments, these tasks can be easily automated with SCADA systems. With utilization from automation in a framework, labor costs can be cut as well as minimize errors with measurements or adjustments. It may seem that SCADA systems just process and store data in a distributed database, but there's much more complexity to the system itself. The system provides numerous benefits over manual labor such as redundancy adjustments, stable backups of time stamped data, and a secure alarm system. Instead of using humans to check for errors



"SCADA systems automate power systems used in many industries. why you should know about them."

throughout the plant, grid, or pipeline, SCADA uses scripts that detect problems in the system, and quickly adjusts the system from creating an outage. If an outage were to occur that slipped past, a SCADA system's distributed database would help workers instantly identify the location of failure. Also, the automation system significantly increases the time of power restoration that comes with an outage; from the control room, at the press of a button, a worker can enable switches and help reroute power to unaffected sections

SCADA Security:-

While they were once isolated entities that were at the hands of engineers, operators, and system technicians, SCADA systems didn't always prioritize secure connections to public networks, leaving many SCADA platforms open to attack. Today there are numerous standards that are required for a secure SCADA platform to run and be operated by its users. If any of these procedures and standards are not practiced correctly, the SCADA platform can be left open for attacks or viruses. However, even with all of these procedures and practices, there is a huge lack of authentication in the design and operation of some existing SCADA networks. While these systems control electricity grids, gas and oil pipelines, and water distribution, the security of these systems needs to be developed extremely well because it can cause massive problems to many areas of society.

While SCADA platforms provide a vast number of benefits and reductions of cost and downtime of the system, there are still many security threats that need to be worked out. The drive of SCADA platforms is to provide users with quick access to PLCs/RTUs and provide simplistic integration of equipment controls to user interfaces. These systems can be a great tool, but need to be heavily monitored through HMIs. For example, the system can switch a motor or power on or off and can operate the equipment locally.



ABOUT ELECTRONICS AND INSTRUMENTATION ENGINEERING

The Applied Electronics and Instrumentation curriculum in most universities includes courses on the design of analog and digital electronic devices used for measurement and control of parameters such as flow, pressure, temperature, and level, and the calibration of such instruments. Students learn to program microcontrollers, and to design and implement communication networks composed of sensors, actuators, and programmable logic controllers (PLC). Since instrumentation engineering is closely related to control engineering, some universities include courses on signals, systems, and control theory. The degree title mentioned in the question, Applied Electronics and Instrumentation, is most popular in India. Therefore, we decided to look at what Indian universities that offer Applied Electronics and Instrumentation degrees say about the career paths that graduates are likely to have.

The

primary focus of instrumentation engineering is the development and implementation of electrical and electronic instruments for the purpose of measuring, monitoring, and recording physical phenomena. Among many other types of instruments, instrumentation engineers develop seismic sensors, blood glucose sensors, fire detectors, and ampere meters.

Instruments developed by instrumentation engineers include analog, digital, and mixed signal electronic devices. Major users of these instruments include industries that rely on automated processes, such as chemical and manufacturing plants. They depend on these devices for safety, and for improving productivity and reliability. A very large field of work is also offered in biomedical engineering, and in metrology (the discipline that provides devices for technical measurements). The scope of instrumentation engineering is vast, and appears to be growing, in part due to the increased use of automatic control in manufacturing and process plants. Growth is also tied to the development of more accurate and more robust sensors, which allow us to detect phenomena of interest (such as the presence of minute levels of toxins in food) with much higher precision than what we could do a generation ago.

Here is what the Department of Applied Electronics and Instrumentation Engineering at the Silicon Institute of Technology in Bhubaneswar says about career prospects of its graduates: The demand for Applied Electronics is growing rapidly and job opportunities for graduates are multi-faceted. The graduates can work as Manufacturing Engineers in [multi-national corporations] like Sony, LG, Samsung, and Philips, as quality controllers, research, design & development consultants, entrepreneurs, and teachers.

The Applied Electronics and Instrumentation Department at Engineering also cites rapid growth and the diverse application of the field: The field of Applied Electronics and Instrumentation Engineering is growing at a very fast pace. Over the past three decades the field of instrumentation has seen an extremely widespread application in almost all rolling mills, cranes & hoists, arc furnaces, chemical engineering, process control, and static relays. Some professional

societies for instrumentation that provide educational and career information about this growing field are the Instrument Society of America; the Instrumentation and Measurements Society of IEEE; the Institute of Diagnostic Engineers (US), and the Institute of Measurement and Control (UK).

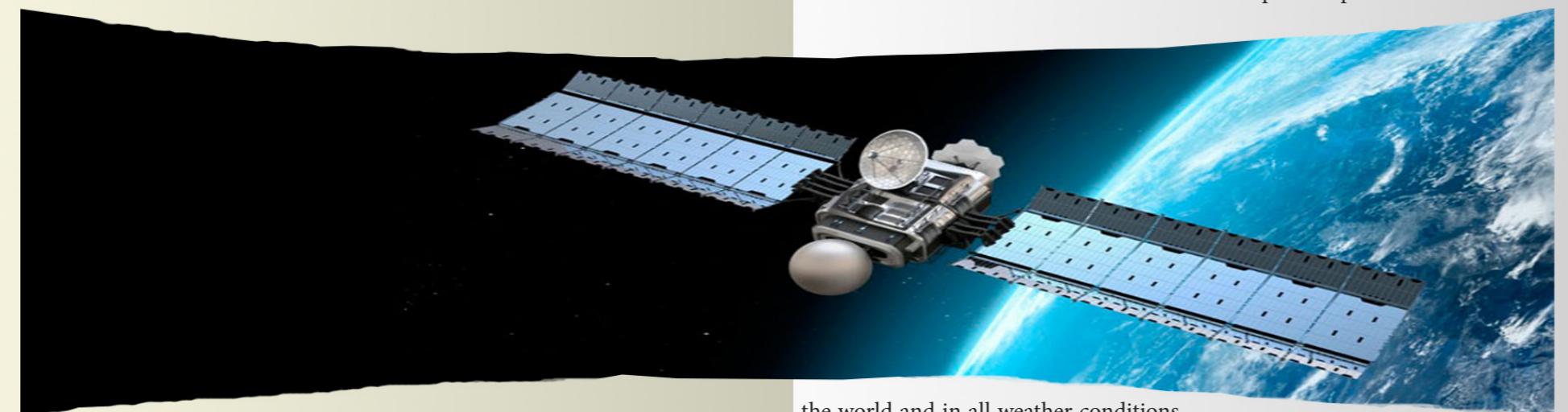
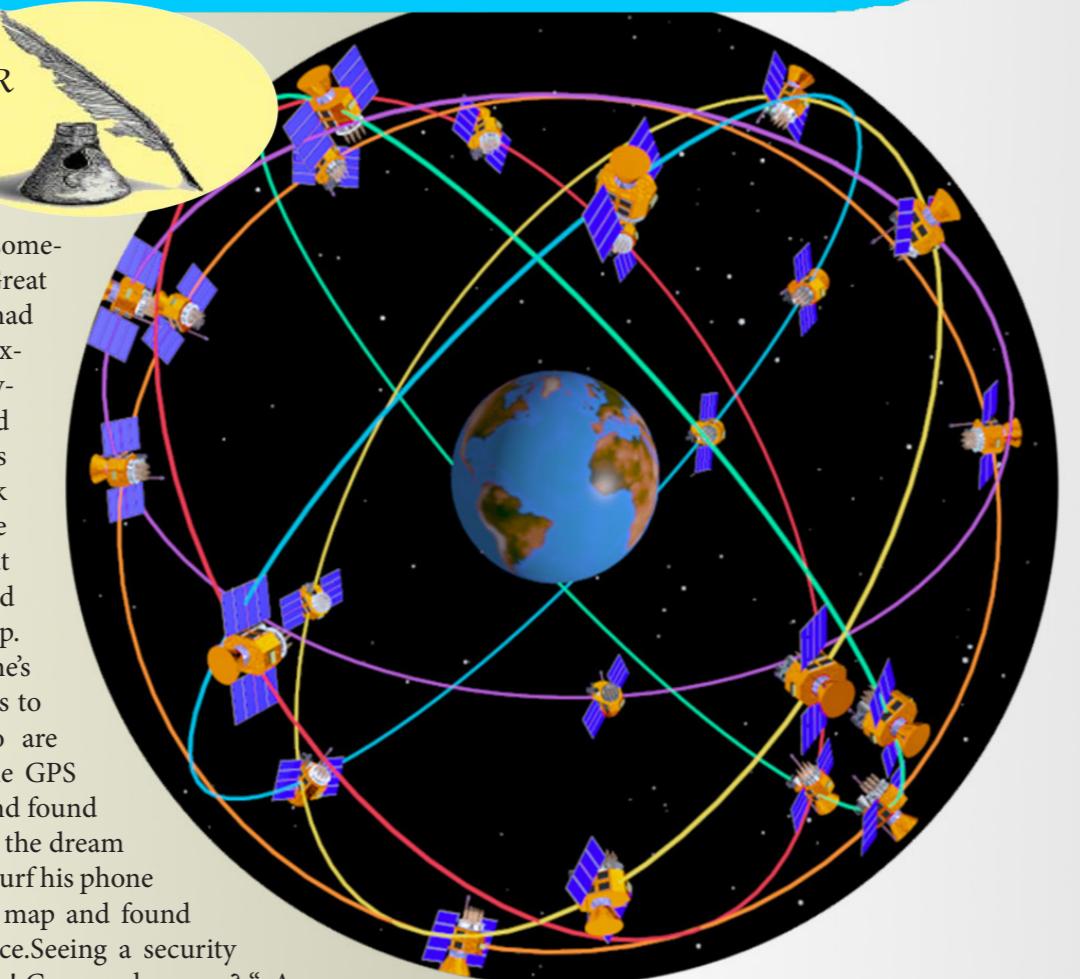


(New programs &
Future scope,
Where you are ??)

GPS-WHAT WHY & HOW

SHIBAJYOTI MAJUMDER
14 UEI002

Ryan was lost somewhere in the Great Barrier Reef. He had nothing to do except wait and wait until anyone rescue him. Luckily he had his phone with him but it was offline. Ryan was a maverick personality. He will not give up soon. He tried to get out but that was in vain. He felt so tired and hungry that he fell asleep. In the dream he heard someone's echo saying "I am there always to help you". Ryan asked "Who are you?". The voice said "I am the GPS in your phone". He woke up and found that it was morning. Recalling the dream he had last night, he began to surf his phone and found GPS. He used the map and found his way back near the entrance. Seeing a security official he asked "Police! Police! Can you hear me? ". A middle-aged well-built man turned saying "Yes". He was astonished to see a little boy running towards him. Immediately he said "Are



"you the boy who was lost yesterday?". Ryan was panting and said "Now please take me to home? ". When he reached home his mother hugged him-tears rolled down her cheeks. He felt on the top of the world. Now he has a story to tell everyone. But his quest was not over, searching about GPS he came across the following article in a magazine:

"GPS is a satellite based naviga-

tion system. GPS stands for Global Positioning System and was developed by the US Department of Defence as a worldwide navigation and positioning facility for both military and civilian use. It is a space-based radio-navigation system consisting of 24 satellites and ground support. GPS provides users with accurate information about their position and velocity, as well as the time, anywhere in

the world and in all weather conditions. It uses a digital signal at about 1.5 GHz from each satellite to send data to the receiver. The receiver can then deduce its exact range from the satellite, as well as the geographic position (GP) of the satellite. The GP is the location on the Earth directly below the satellite. This establishes a line of position (LOP) on the Earth. It is basically used for navigation in 3 dimensions. GPS provide signals

which are received by the receiver to calculate time, position, velocity etc. Navigation receivers are made for aircraft, ships, ground vehicles, and for hand carrying by individuals. They can provide information upto accuracy of one hundred metres.

The GPS works in the following manner:-

Actually satellites act as reference points. The GPS Constellation consist of 24 satellites at an altitude of approximately 20,000km and has a period of 12 hours. The orbit of the satellites are same as that of earth's ground track. There are six orbital planes with four satellites in each plane equally placed 60 degrees apart. Now, these satellites are placed 55 degrees inclined to equatorial plane to cover polar regions.

The orbital motion is controlled from Schreiber Air Force Base. Now, they send ephemeris and other orbital data including clock correction to the satellite. At the same time they take care that satellites and data are in acceptable forms and extents. Then satellite sends subset of the ephemeris and the data which form the base for GPS calculation. One thing I forgot to tell you that each satellite consists of four atomic clocks.

Let me tell you the function of these four atomic clocks. Atomic clocks provide precise and accurate time to the

tude, longitude. By the time everyone of you would be thinking about the fourth satellite. Guess what is its function!! If you think about altitude let me tell you that 'Yes you are absolutely correct'. It does not need an atomic clock and the

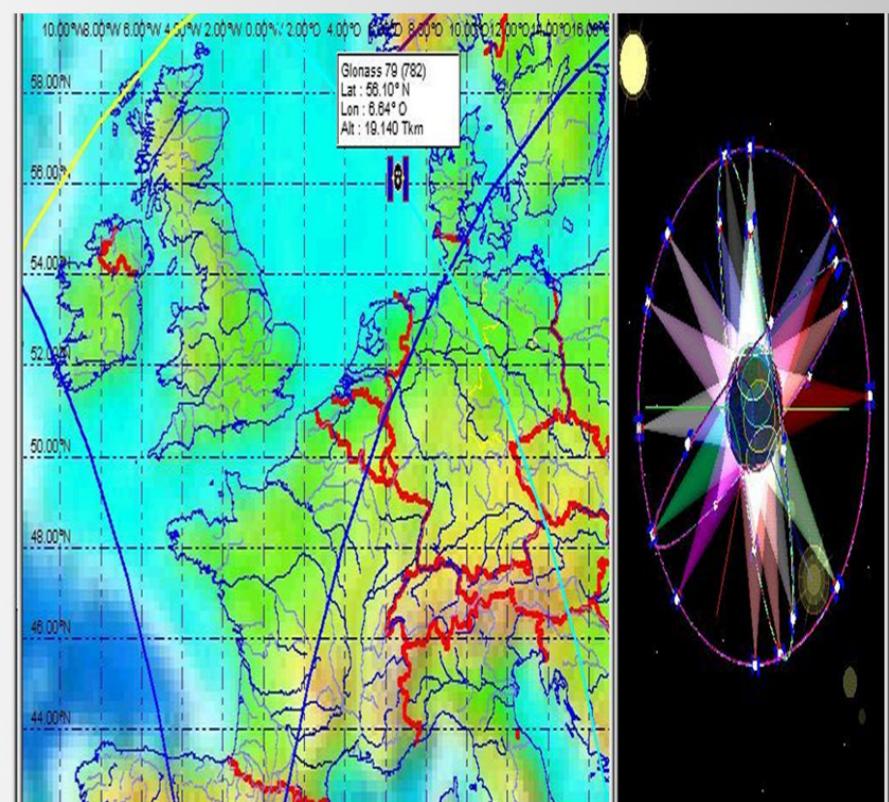
must account for propagation delays, or decreases in the signal's speed caused by the atmosphere. To calculate the distance between itself and any given satellite the receiver multiplies the travel time by the speed of light. This principle is fundamental to GPS.

After all these steps are complete, we know distance from three satellites with great precision, which in turn gives us accurate position. Now, all these data are triangulated to give the information about latitude,



points. It is used by airplane to reach distant airports saving fuel. It is used by militants in war. Days are not far that we will see high definition images of our house in maps. All hail to GPS!!!

Ryan was now satisfied. He was happy...



user. Receiver continuously receives time signals from the broadcaster. The signal contains data that a receiver uses to compute the locations of the satellites and to make other adjustments needed for accurate positioning. The receiver uses the time difference between the time of signal reception and the broadcast time to compute the distance, or range, from the receiver to the satellite. The receiver

measurement is used to display altitude. Thus four satellites are used to compute latitude, longitude, altitude and time.

The GPS technology is used to measure distance between two

Lesson From Failure



Amit Kasana
14UEI053

“Failure may not be an option, but it is certainly an opportunity.”

If we ask a basketball player to imagine taking the final shot of a game, that player will almost certainly imagine the ball going through the hoop to win the game. Similarly, if you close your eyes and imagine yourself completing an important school or work assignment, you will likely envision yourself being successful, maybe even wildly successful. Failure is not something we generally desire in our daily pursuits. That doesn't mean, however, that failure cannot provide positive outcomes. Indeed, there are rather famous examples of individuals who have achieved tremendous success after having failed spectacularly. Stephen King went through 30 rejections before his first novel, Carrie, was accepted for publication. Steven Spielberg was rejected from the University of Southern California School of Cinematic Arts more than once. Thomas Edison tried somewhere between 1,000 and 10,000 times before finally creating the light bulb. We could fill the pages of EIE Magazine with similar examples from individuals across such diverse walks of life as business (Bill Gates), sports (Sachin Tendulkar), and politics (Narendra Modi). Whenever we perform

an activity, whether for work or for play, we routinely receive feedback, positive or negative, from our environment and adjust our behavior accordingly. We can all recall those times in our own lives when we were the recipients of positive feedback in the form of praise, adulation, or congratulations. Perhaps it was related to landing a big account, scoring the winning touchdown, or solving a particularly challenging problem. We may reflect on those times as successes. We can also likely recall times when we were the recipients of negative feedback such as scolding, receiving a poor grade, or perhaps even getting fired. Although these failure experiences may not elicit a smile, they are nonetheless absolutely critical if we want to learn about our capabilities, understand our strengths and weaknesses, and ultimately improve our performance. Despite the self-learning that can occur, failing is not a pleasurable experience. In the moment, we likely experience feelings of inadequacy, incompetence, anxiety, or any number of other unpleasant states. What is important about a failure experience is not the particular event, but rather, how the event is perceived and inter-

preted. If we refuse to see failing as a learning opportunity, we consign ourselves to allowing the failure to define us. One of the most important—and repetitive—failure experiences in my professional life is the rejection of papers submitted to academic journals. It is quite common to spend months, if not years, working on a research project, developing a manuscript, and submitting it to a top journal, only to have it rejected for publication. I learned very early in my graduate training that such rejection (failure) is to be expected and that my reaction should be to learn from the reviewer's criticisms, then revise the paper and resubmit it. Ultimate success can only be attained by incorporating the negative feedback and learning from past experiences. We have all failed and will continue to fail. Instead of focusing on the sting that might be associated with these events, we would do well to maintain a focus on how the experience will make us stronger in the future. Failure may not be an option, but it is certainly an opportunity.

16 THINGS THAT WE CAN LEARN ABOUT LIFE FROM CHESS

-
- 14) After the game, the king and the pawn go into the same box. In literal sense it means that the pieces go into the same box no matter how lowly their position was in the game.
 - 13) Be flexible. It seldom goes the way you planned. Have a plan A through Z.
 - 12) The threat is better than the execution.
 - 11) If you are feeling crowded, free things up.
 - 10) Ignore meaningless threats, anticipate and deal with dangerous ones swiftly.
 - 9) Surprise and impress people with unconventional moves, not by dumb ones.
 - 8) Appraise one's position honestly, if it is bad embrace it and do something about it, else make it better.
 - 7) Look beyond the obvious.
 - 6) Sometimes you need to sacrifice in order to achieve a breakthrough.
 - 5) When you are winning, never think about victory, it is not over until it is over.
 - 4) Like a pawn getting promoted to a more powerful piece in chess, if we move forward constantly we can bring out our latent potentials and become stronger.
 - 3) A loner cannot survive on his own. True, we humans are social beings and we need the company of others in difficult as well as happy times.
 - 2) Unity is strength. When the army is divided in to several units, the army crumples.
 - 1) The queen can do whatever she wants but everyone wants to check the king. The game can go on without the queen but not without the king.

15) The best defense is a good offense.

16) Sometimes whatever we do is bad for us. In chess it is called zugzwang. Just let it pass.



1) The queen can do whatever she wants but everyone wants to check the king. The game can go on without the queen but not without the king.



2) Unity is strength. When the army is divided in to several units, the army crumples.



3) A loner cannot survive on his own. True, we humans are social beings and we need the company of others in difficult as well as happy times.



REX JOMY JOSEPH
12UEI033

Talk with Swapnil.....

ABITS pilani graduate, Swapnil aims to join NTPC(National Thermal Power Corporation), a PSU(Public Sector Under-taking). This young lad believes that he would not have made it to the top without the support of his parents.

Q- Congratulations. So how do you feel being the gate 2015 air 1 topper for Instrumentation Engineering?
A- I feel great. I cannot define my feelings. It's been two three days that gate 2015 results got declared but the feeling hasn't sunk in. I feel at top of the world for making my parents proud. You know it was it was my father who the result and he had tears in his eyes. He has been with me for the last three months. It was big moment for me.

Q - Were you expecting to bag air 1 ?
A- I did expect that I would that i would be somewhere in the top 10 students , but this was not expected ,not at all .you always have hope ,but always thought that I wouldn't top.

Q Tell us about your educational background.
A- I graduated last year from bits pilani and then joined a company called IMS helth in Gurgaon. I left the job in November last year as I was not getting sufficient time for my gate 2015 preparation. I aimed to score well in the score. I did not aim ton top but definitely be one of the toppers.

Q- Is it necessary to take coaching classes or it self-study enough?
A- It's not at all necessary to join coaching classes .i joined because i had no one with me to study. Infect, I joined weekend classes only as i was working that time .one of the other reasons for me to join coaching institute was that i could get to meet teacher who would be able to solve my queries.
Self-study is more than enough for gate preparation. And actually what matters is self-study only. You know coaching centre will tell you, what to read, how to prepare, but at the of the day, strategy matters and how well have you understood the concept.

Q- What was your study plan like?
'Study whenever you get time was my mantra for gate preparation, till November, I was in a job and came home around 7:30 pm. while I was working ,i aimed to devote four hours each day to my studies .when i left my job, I used to study around 10-12 hours .

ASHISH KUMAR KANOJIA
14UEI036

Q- When did you decide to take gate? And why gate?
A- In BITS, there was a provision of internship of last six months ,so I wanted to know where and which field do i fit in the most .in the third year ,i was greatly interested and inclined towards VLSI design and all .so i did my internship in company in greater Noida . In the first two months of internship of internship, I enjoyed a lot but I lost my interest soon. And that's when I knew that VLSI is not my thing. Then, I joined an analyst company thinking that maybe MBA is my future. I wanted to give it try .but here too, I couldn't give my best. This is the point where I decided to go instrumentation engineering and then go to PSUs. I wanted to be linked to the core subject. I was determined to do it. Actually, determination, consistency and hard work are the three magic words of my life .also the key of success are my parents.

Q Tell us something about yourself.
A- I am happy go lucky person and I like taking to people, especially elderly people. I love taking experiences from them. Being the only son of my parents, I have always been pampered to the core .i do what I like and my parents always support me. I love playing computer games, travelling, playing table tennis and helping people too.

Q- Is this your first attempt?
A-no this was my second attempt. Last year my rank was 108. However my preparation was not good at all but I took the exam as all my friends took the exam.
Also, I got a call from IOCAL last year.

Q - How long have you been preparing for the exam?
I have been preparation for the last three months .you have to be through with your concept .I am not rocket science for me.it was just like brushing up my concept once again.

Q-what is difference between your UG exams and gate 2015?
A- There is no difference in the syllabus but there is a difference in the strategy .In UG exam, you need to explain how a particular machine works but in gate, You need to explain the application of that machine. The UG exam most elaborate. And gate is bit tricky and shorter because at this level, your aptitude is being tested.

Q - What is your score?
A- Last year my score was 42.33 out of 100 and this year i scored 83.67out of 100.

Q- Did you take coaching class?
A- Yes, I did take coaching classes in august.

- . Practice a lot .improve your strategy.
- . Believe in yourself.
- . Be confident. Not overconfident or under confident.
- . Do not lose your hope. The paper is designed for students at this level .so it's not a rocket science .be cool and calm and take the exam.
- . Keep your pace .take the exam with ease.
- . Never compare yourself with anyone. And if you have to, then compare yourself with yourself.
- . And lastly believe in god.

Q Any tips for students taking the exam next year?

A-

- . Be consistent.
- . Be true to yourself. Don't show other what you can do .improve your self and have competition with yourself.

STUDENT SUICIDES :WHY IN INDIA??



Rakoti Ashok Chakravarthy
13UEI039

Every 1 student out of 10
student is sufferes from stress



don't re-
alise right now, then it
is going to have very alarming effect
on future generations and the future of In-
dia. Let us together define education as once swa-
mi vivekananda said " Education is the manifesta-
tion of perfection already present in man".

It is the time for the government to make changes in the school
and colleges curriculum's in order to make it student friendlier
including things like sports, music and other skills those can earn
their living rather than giving importance to engineer-making
circriculums or high percentage achieving ones. If we don't realise
right now, then it is going to have very alarming effect on future
generations and the future of India. Let us together define ed-
ucation as once swami vivekananda said " Education is the
manifestation of perfection already present in man".

My humble request to all parents,teachers,
and every elder one in India is to first realise the
practical abilities of their children or stu-
dents and react according to them.

It is the duty of the

Bengalu is on top
followed by Chenni

In suicide ranking Bengal-
uru is on top

parents
to realise the right kind
of schooling environment for their
children's mental and emotional develop-
ment that makes every child to lead the life they
wanted to and are able to. It is time to realise that every
child have the right to live the life of their own dreams and
not the life their parents dreamt or their neighbours and soci-
ety wanted them to.

It is the time for the government to make changes in the school
and colleges cirriculum's in order to make it student friendlier in-
cluding things like sports, music and other skills those can earn
their living rather than giving importance to engineer-making
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future generations and the future of India. Let us together de-
fine education as once swami vivekananda said " Ed-
ucation is the manifestation of perfection already
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My humble request to all
parents, teachers, and

In the
year 2014, more than
8000 students in India gave up
their lives due to various reasons ,most of
them are found to commit suicides due to fail-
ures in exam or others related to studies. Many schol-
ars and experts counsellors say that they were unable to
tackle with the failures or pressures created by failures in
their lives. I am here not talking about the so called succeful
people in their lives but I am bothered about the failed ones.
So why do one feel like a loser or feel like ending his life. Is it
because he/she failed to pass in exams or failed to get a high
percentage in their board exam? Or unable to clear an entrance
exam or failed to get a job in a company after completing
graduation(where we work our asses off to get an average
income?). What's the matter? Did we ever tried to answer
these questions which raise almost in all of our lives.

Well here my intention is not to blame anybody
I am just trying to find the truth behind
the problems.
First-

In 2005 only 5887 suicide
case because of exam stress

That means 16 a day
(these are just of-
ficial figure

In 2009 = 2010, in
2010= 2479 & in 2011=2381

Just because
of exam fail-
ure

ly, let us
try to think about the
education system we have in India
right now, before some 5-10 years in the
primary or high schools we used to have a kind
of life where we had caring parents to look after our
small still serious problems, we had good friends to share
our happiness and to play with. We used to have well qualifed
teachers who guided us to win the toughest battles of life,
caring about our studies, character, life and future. But now a
days people have become well educated(what they feel about
themselves!!),where they are more confused about life in the
world of high competition and unaware about the proper defi-
nition of education. For them it means getting a 90% or above
in board exams, craking 'JEE' or getting a seat in the coun-
try's top most colleges.This attitude of parents,teachers
and sometimes the neighbours in one's locality
made some schools to develop cirriculum's
that make students feel that they are
not fit to do anything if they
don't get

90% of them are between
age of 12-19

06

01

02

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04

05

ranks or
feel that they are born
only to get percentages. These cir-
cumstances are leading to the lack of men-
tal,physical and social development of the kids
and are not willing to accept even small loss or failure
in life. They are willing to end up their lives instead of fac-
ing truth boldly.

After getting desired ranks or seat in a college ,
these students are treated like demi gods and others will be treat-
ed as idiots. But at this point of time the real life unfolds failures,
losses tend to become part and parcel of one's life. Now a days col-
lege managements, teachers and sometimes parents even do not
look into the capabilities of the children and pressurise them to
get good percentages or high grades. When a student fails to
achieve it, or when a students suffer a loss in relationships
or physical harrasments in the form of ragging there
are very few people available around them to
address their agony and sorrows. In such
situations many feel like only
they have

THE TORTOISE AND THE HARE CONTINUED.....

AMBARISH NARAYAN
13UEI004

We all have heard the story about the race between the tortoise and the hare, the one with the 'slow and steady wins the race' moral behind it. Tortoise being slow and steady wins the race.

After the race when the Tortoise came home he heard people arguing behind his back. Some of whom said that it was mere coincidence that the Tortoise won the race. If the hare had not slept in his way it was impossible for the Tortoise to win. The Tortoise was shattered after hearing such thing and so he went to Zeno (Greek philosopher of that time) for help. Zeno taught him about physics, mathematics and some philosophy. The Tortoise after learning from Zeno, went to Achilles (A Greek warrior) to prove his supremacy .He challenged him that he can win the race with Achilles if Achilles can

give him a small head start. Achilles laughed at this, and asked the Tortoise how much head start he wants. 'Ten meters' the Tortoise replied.

Achilles said 'U will surely lose my friend, but let us race, if you wish it' 'On the contrary I will win and I can prove it to you' replied the Tortoise. 'Go on' said Achilles with less confidence.

'Yes' replied Achilles with less confidence

'And I will again cover some distance, however small in that time' Tortoise said 'which you have to cover up.'

Achilles said nothing. 'And so this means for each moment when you will be catching the distance between us I will be adding a distance, however small for you to catch up. Thus you can't beat me.' Explained the Tortoise.

Achilles after thinking for some time decided to concede the race declaring the Tortoise as the winner.

CONFUSING!!!! Isn't it? This is one of the several paradoxes of Zeno, the great philosopher of Greece. Although practically it seems impossi-

bility for the Tortoise to beat Achilles in a race, Zeno's paradox manages to confuse us and it seems at one point that the Tortoise is right.

There are several explanations for Zeno's paradox each one with its own limitations. One of the possible mathematical explanations is as given below:

Let us suppose Achilles gives the Tortoise a head start of, 10 m, and let us assume he runs at 10 ms^{-1} and the Tortoise moves at only 1ms^{-1} . Then by the time Achilles has reached the point where the Tortoise started (Say, $T_0 = 10 \text{ m}$), the Tortoise will have moved on 1 m to $T_1 = 11 \text{ m}$. When

Achilles reaches T_1 , the Tortoise will have moved on 0.1 m (to $T_2 = 11.1 \text{ m}$).

When Achilles reaches T_2 , the Tortoise will still be ahead by 0.01m, and so on. Each time Achilles reaches the point where the Tortoise was, it will always have moved a little way ahead. But form simple equations of kinematics we can tell that Achilles

should pass the Tortoise after 1.11 seconds when they have both run just over 11 m, so Achilles will win any race longer than 11.11m.

Then why in Zeno's argument does it seem that Achilles will never catch the Tortoise?

If you think of the distances Achilles has to travel, first 10 m to T_0 , then 1 m to T_1 , then 0.1 m to T_2 etc., we

can write it as a sum of a geometric series:

$$10 + 1 + 0.1 + \dots + 10(2-n) + \dots$$

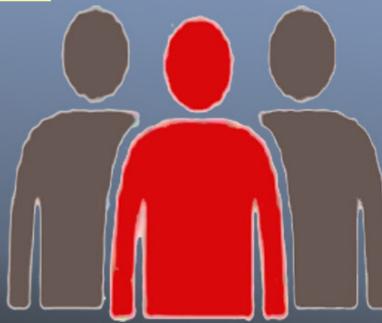
Now, although it is an infinite series, it is a convergent series, which means it will have a finite value (equal to 11.11m). And as he only has to travel a finite distance, Achilles will obviously cover that distance in a finite time if he is travelling at a constant speed greater than the speed of the Tortoise. Thus it is possible for him to very easily beat the Tortoise.

There are several paradoxes of Zeno each with many explanations, we can Google them to quench our thirst ofquisitiveness and can even propose a new explanation.

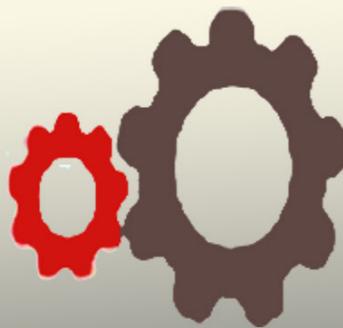
Introduction:



Good manners form an important part of our civilization. We know a man from his manners. Manners are important for our conduct in the society. So, we put too much stress on learning manners. Parents want to teach manners to their children. Teachers want to teach manners to their pupils. Mentors want to teach manners to their disciples. Because manners are so important for us.



02



Manners at a general meeting:

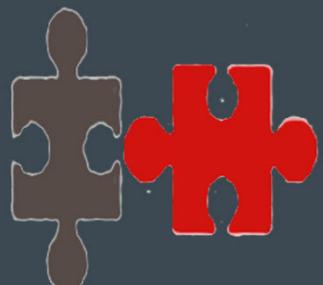
We should behave properly when we are in a meeting. We should obey the president of the meeting. We should not disturb or interrupt when one is speaking. We should not indulge inside-talking when we are in a meeting.

Conclusion:

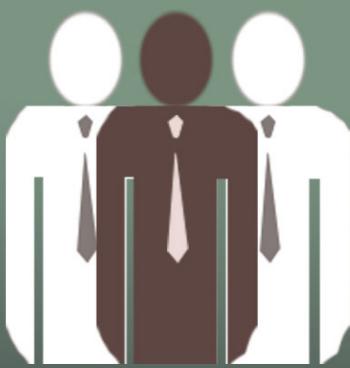
Good manners are quite essential for us. So, students should try to observe good manners

at every place.
Teachers should guide them in this respect.

04



Manners are very useful. Manners make us gentlemen. We are called gentlemen when we show good manners. Good manners make friends for us. Because people like to make friendship with the people of good manners. Good manners may turn our enemies into our friends. But bad manners will surely turn our friends into our enemies. So, we should be very particular about our manners.



The basic principles of good manners:

There are certain fundamental principles on which all our manners should base. They are as follows. We should not hurt the mind of others. We should not wound the feelings of others. We should avoid pride, vanity, emotion, anger and harshness of voice when we behave with others. Our talk should be always plain and sweet. We should give patient hearing to others. We should speak less of ourselves. Our attitude should be sympathetic-

03

ic. We should learn how to make appreciation of others. We should observe the forms of behaviour like 'please', 'kindly', 'thanks', 'sorry', 'no, thanks', etc. when they are due. We should be respectful to our elders, and superiors. We should be loving and kind to our youngsters. We should be sincere in our attitude. We should not make false promises. We should never deceive. We should be neat and clean. These are some of the basic principles upon which all our manners and behaviours should rest.

Manners at school:

In the school we should make kind behaviours to our fellow students. We should help the weaker one in their study. We should respect our teachers. We should salute our teachers at the first meeting in a day. We should work well in our subject of study. Because not to be sincere for a subject is a disrespect to the subject-teacher. We should not criticize our teachers. We should maintain proper discipline in the school

“The Power to Create”

*“Powerful And Life-Changing
Lessons On How To Maximise Your
Potential And Live Your Dreams”*

Introduction :-

Are you living the life you really want to live? Do you know exactly what the kind of life you would want to live is? Do you realize that you have the power to create your life? More likely than not, your answer to the first question is “no” and to the second question your answer is “yes”. I would challenge you however and say that it is more probable that you are not living the life you want and that, in actual fact, you have only a vague idea what kind of life you really want.

In 97% of cases I would be right because it has been shown time and again that only 3% of any given population will excel in any given circumstances. Part of the reason for this is that only a handful of people actually take the time to plan and create their ideal life.

The error of our ways: -

It often strikes me as strange how many of us are so organized and diligent when it comes to studying at school or performing well at work, yet we are so terrible at excelling at the most important thing of all – our lives! Let me give you an example. Most of us know the value of planning at our work places. In fact, we are probably very good at it and maybe even take the lead in planning at work. We make plans as to what we want to achieve during a certain period, we analyse our strengths, weaknesses, opportunities and threats; we make strategic plans and implementation plans and budgets and a lot of other things. It's tedious work at times, but we do it anyway because we know that without these plans our companies or organizations would fail to achieve good results.

Then we knock off and go home and, unfortunately, leave our brains at work. Somehow, what we do at work doesn't seem to apply any more. We just lay back and hope for a better life to magically appear. No plans. No timeframes. No budgets. No targets. No written goals. It is no wonder so many are brilliant at their careers and yet miserable failures when it comes to their personal lives. We do not apply our knowledge and expertise to our own lives.

Thoughts are things :-

How? You must create it in your mind. Mohandas K. Ghandi said very truthfully that “a man is but a product of his thoughts; what he thinks, that he becomes.” Imagine for a moment that you have lost your memory. You have forgotten who you are and everything you have or don't have. You know nothing about yourself. You now have a great opportunity to recreate yourself! Money is no object. You have all the resources you need at your disposal. There are no restrictions. You can make your new life whatever you want it to be.

One thing is for sure. The past is dead and gone. We can't go back there. The

Today is all you have :-

future is the only thing we have control over. Right here and right now is the only time we have that control. Don't put it off till tomorrow, start right now to create the life you want in your mind and don't forget to write it down. Think about it every day and every waking hour until it becomes a part of you.

Why should you bother? Because, as Earl Nightingale put it, “everyday we put in place actions and ideas that will determine the shape and substance of our lives.”

You must plan your life with much more care and attention than you would

Pay attention to your life :-

plan your business and your work. Stop living by waiting on chance and luck to make you happy, rich or healthy. If most of us put just half the effort we put into our jobs into planning our lives we would be amazed at the difference that would make. You can take that first step of creating the life you want right now.

AJAY KUMAR UCHENIYA
13UEI003

Conclusion :-

Someone sent me this quote the other day: “We build our lives, a day at a time, often putting less than our best into the building. Then with a shock we realize we have to live in the house we have built.” How true. How sad. Build your life with the care and effort it deserves. Don't live your life with no direction and no hope. You can create that perfect life. You can dream big, and your dreams can come true. You are all you can be...go on and be it!

“If You Can Dream It And You Want, It Bad Enough, Then The Reality Will Become Real.”

Self-improvement is a journey that anyone who wants to excel in life must take. It does not matter in what area you want to excel and progress, whether it be in your business, in your work, in your studies, in your marriage or in your spirituality. All aspects of our lives can only truly improve if we take responsibility for their improvement. The greatest area of such improvement that will impact all other areas of our lives, is improving ourselves.

This can be at several levels:

1. Improving your KNOWLEDGE
2. Improving your SKILLS

But is it clear from this that even improving your skills first requires improving your knowledge. Therefore

knowledge that will equip you for success in life and give you the tools you need to excel. Additionally, why not share your won wisdom and knowledge that could be of help to others as well. It is often said that experience is the best teacher, but it does not have to be YOUR OWN experience.

We can all learn from other people's experiences, mistakes and success. That is why it is important to share what you know, because you can also learn from what others know.

"A man is but the product of his thoughts. What he thinks, he becomes."

Mahatma Gandhi

A

B



INTKHAB AHMED
13UEI017

Self Improvement (Learn, Grow and Succeed)

E

C

D

completed, judgment and requires that we knowledge by and choices. So cause having such discernment re-first have the right which to make such judgement again, knowledge comes out on top. You need to have the right knowledge in order to navigate the unpredictable terrain of life.

This section of the site and others are there to give you that right

we can conclude that all self-improvement begins with self-growth in the area of our knowledge. *"Man's mind, once stretched by a new idea, never regains its original dimensions."*

By- Oliver Wendell Holmes, US author & physician (1809 1894)

The mind is the thing that we must stretch in order to broaden our reality and capabilities. Without a stretched and open mind that is

receptive to new ideas and information, self-growth is impossible. But with such openness and receptivity to new ideas comes great responsibility. This is because

not every idea or theory is correct. Some things are wrong and some things are dangerous and can be destructive. Therefore, we must use our judgement and discernment in deciding what ideas to accept and what ideas to reject.

Accepting correct ideas and information will lead to success. Accepting wrong ideas and information can lead to failure and frustration.

Here also the circle is

At Night.....

BIPASA CHATTERJEE
14UEI019

When darkness prevails all around

And gloom veils the sky

Sudden epiphany dawns upon me,
And pain strikes hard...

Emptiness gazes upon

Through the blackness of the night

And the heart sits crouched, afraid, in a corner

Nostalgia walks around

In silent footsteps,
Memories flash in front

And roll down as tear droplets
Memories, of a distant apocalypse,
Alibi and amity...

The walls of dungeon grow up,
Higher each night.
And in that abyss

I lay upon
Exhausted, all used up..

Moist eyes, tear laden, give up soon enough,
Darkness prevails all around and sleep overcomes...



RAJENDRASINH
13UEI038

आधुनिकता के इस दौर में तेजी से भागती दुनिया में भारत जैसे विकासशील देश के ऐतिहासिक कारणों से शैक्षिक और सामाजिक रूप से पिछड़े व आशक्तों को अवसर की उपलब्धता हेतु आरक्षण पाना उनका नैतिक अधिकार है। जिससे वो भी अपनी प्रति ठास्थापित कर देश की प्रगति का हिस्सा बन सके। विकास कि ढौड़ में आर्थिक व शैक्षिक अवसरों के कुछ वर्गों में संकेन्द्रण की अद्यक्ता को खत्म करके अवसर के लाभ को सभी तक पहुँचाने के लिए शुरू की गई यह नीति उस वक्त अपनी प्रासंगिकता से वि-

आरक्षण न दिया जाये ये अन्याय होगा, लेकिन आरक्षण सही व्यक्ति को मिले तभी न्याय होगा।

है। उदाहरणस्वरूप अन्य पिछड़ा वर्ग में क्रीमी लेयर के आय का दायरा बड़ा के, जबकि अनुसूचित जाति, अनुसूचित जन जाति व महिला आरक्षण में क्रीमी लेयर की व्यवस्था न होने से वास्तविक रूप से आरक्षण का लाभ पाने का नैतिक हक रखने वाले व्यक्तियों की अपेक्षाओं के साथ मजाक किया जा रहा है। अन्य पिछड़ा वर्ग में क्रीमी लेयर के आय का दायरा 6.5 लाख रुपये वार्षिक (लगभग 54 हजार रुपये मासिक) कर दिया गया, जबकि एक आँकड़े के अनुसार देश की लगभग 40 करोड़ जनता प्रतिदिन 20 रुपये से कम पर गुजारा करती है। वहाँ क्रीमी लेयर के आय का दायरा इतना अधिक बड़ा कर इन नीतिकर्ताओं द्वारा आरक्षण का लाभ किसे पहुँचाने की कोशिश की जा रही है और इसके पीछे इनकी मंशा व नीयत क्या है

असली हक्कदार तक पहुँचाना व इसे प्रासंगिक बनाना है तो अन्य पिछड़ा वर्ग में क्रीमी लेयर का दायरा बढ़ाने के बजाये उसे सीमित करना होगा और अनुसूचित जाति, अनुसूचित जन जाति व महिला आरक्षण में क्रीमी लेयर की व्यवस्था को लागू करना होगा। फिर अगर इससे भी आरक्षण की नीति को न्याय होता न दिये तो जाति के स्थान पर आय के आधार पर आरक्षण की



व्यवस्था करनी होगी। इस स्थिति में भारत जैसे बहुजाति वाले देश में सिर्फ द्वे वर्ग बचेंगे, एक आर्थिक रूप से सम्पन्न और दूसरा गरीब। इस आधार पर यहाँ जो जातियों में वैमनस्यता व्याप्त है वो तो बहुत हद तक सीमित होगी ही बल्कि सरकार द्वारा चलायी जा रही विकास योजनाओं में जातियों के आधार पर गरीबों के साथ जो उपेक्षा हो रही है उसे भी नियंत्रित कर उसका सही से क्रियान्वयन किया जा सकेगा।

दृष्टेज !

नशा, लालच और बीमारी है
दृष्टेज !

लड़की वालों की लाचारी है
वह जानता है की,
दृष्टेज पाप होता है
फिर भी वह देता है क्योंकि,
लड़की का बाप होता है

दृष्टेज आज कल रखेल बन गया है
शादी रुपी टोर्च का सेल,

बन गया है
लेने वाला ही देता है
समय-समय की बात है
दृष्टेज ही उसकी जात है

आखिर इस चक्फरब्यूह का भेदन
कौन करेगा ?

इस लाचार दुनिया में
अभिमन्यु कौन बनेगा ?

UJJWAL KUMAR
14UEI048

आखिर क्यों

साँस लेना भी तेरे शहर में दृश्यर क्यों है ?
ऐसा माहोल अब दूर घर में क्यों है ?

हर तरफ मौत का आलंक बना रहता है
सबको अलग-धलगा रहने का अखमा क्यों है ?

फूल हर रंग का रिवलने से सजता है चमन
फिर एक रंग पै कुबनि ये दुनिया क्यों है ?

पंच तो जग को स्थिरता है मुद्द्वत का चलन
सच है अगर ये लो फिर हाथ में खंजर क्यों है ?

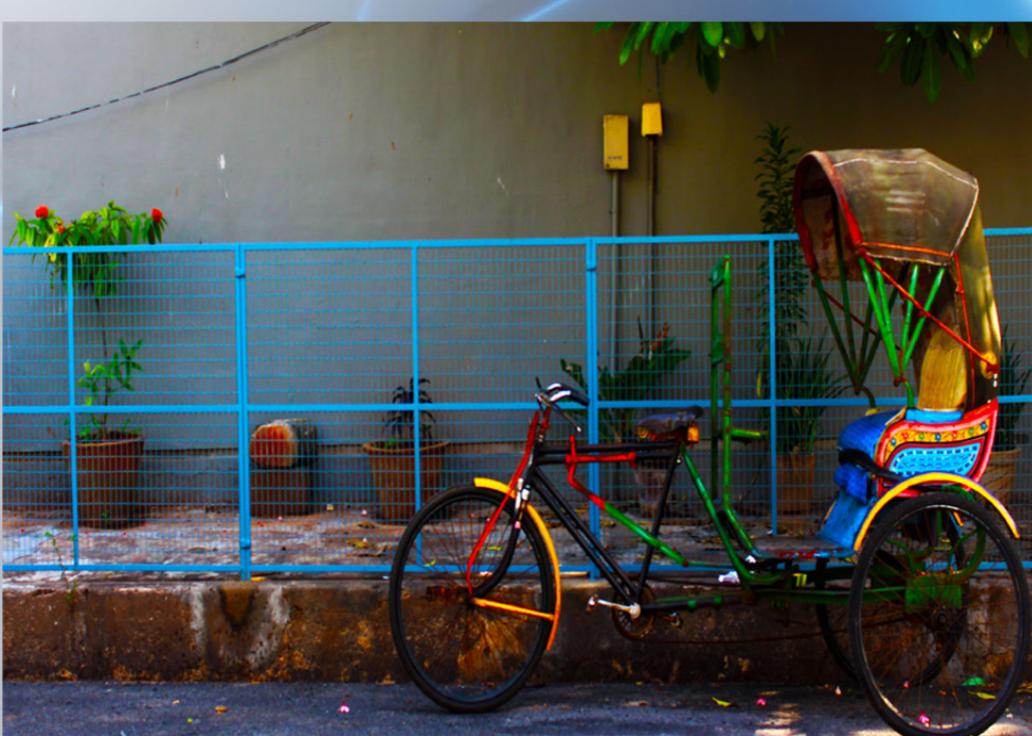
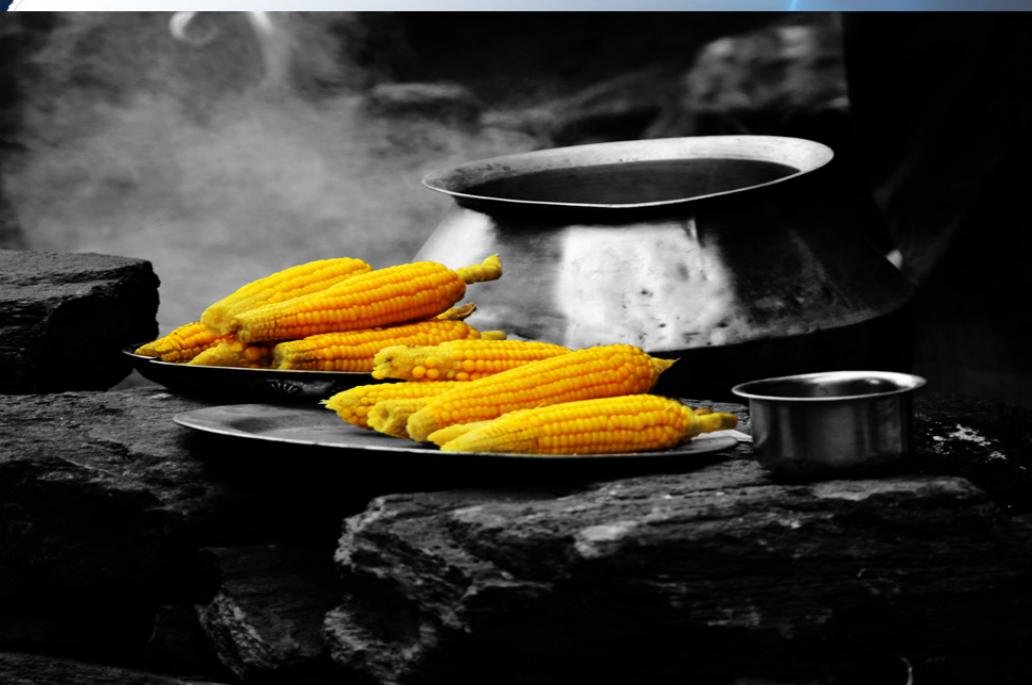
एक सूरज है एक गगन है, धरती भी एक है
फिर टुकड़ों में बान कर जीने को विवश क्यों है ?

रकून से लिपटी है अखबारों की सुरिया
नित नए हाहसों की दस्तान इस दुनिया में क्यों है ?

बुद्धी है इज्जत और जिन्दगी बेकसूरों की
ज्ञाना कमज़ोर मेरे सा द्रु का रहस्यर क्यों है ?

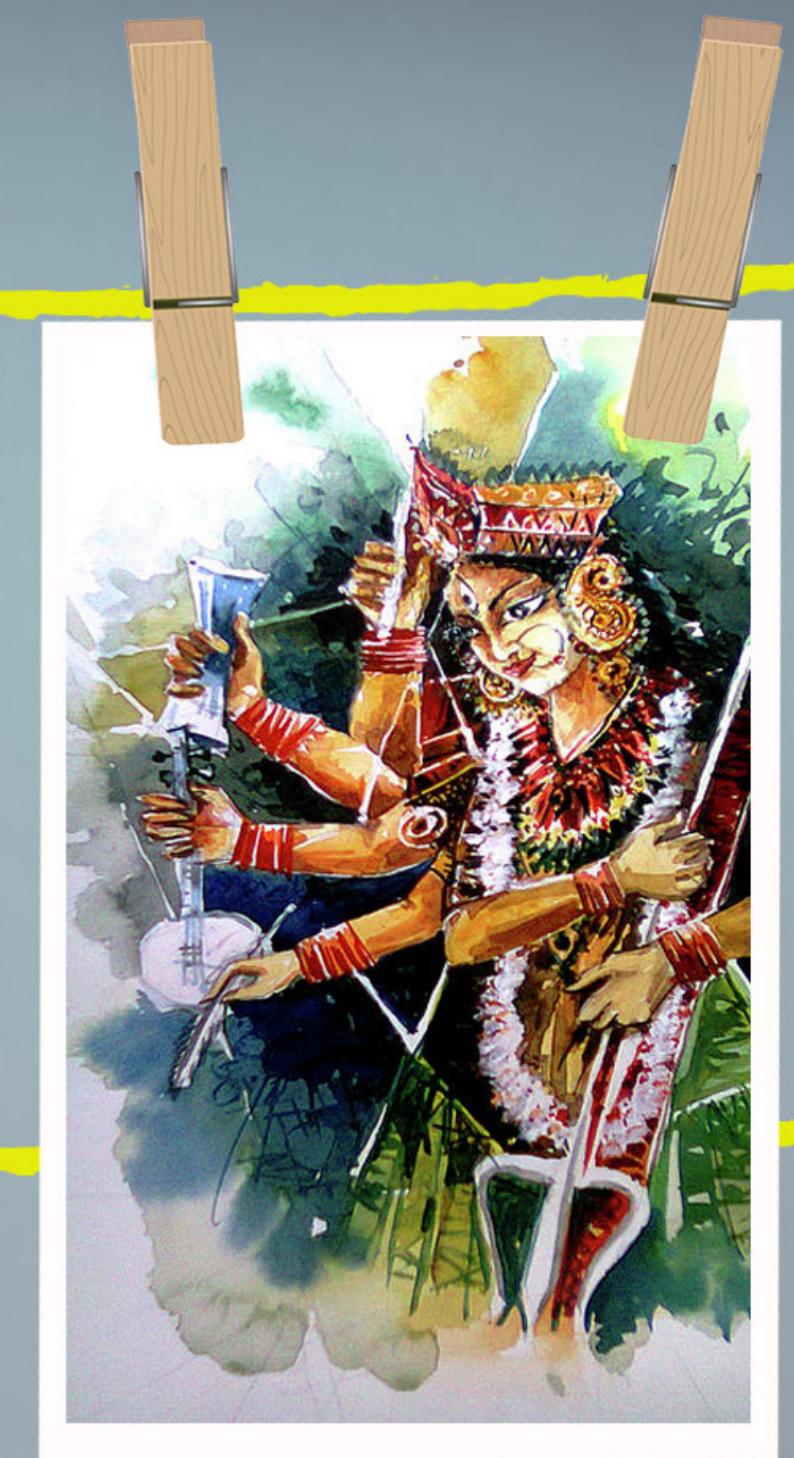
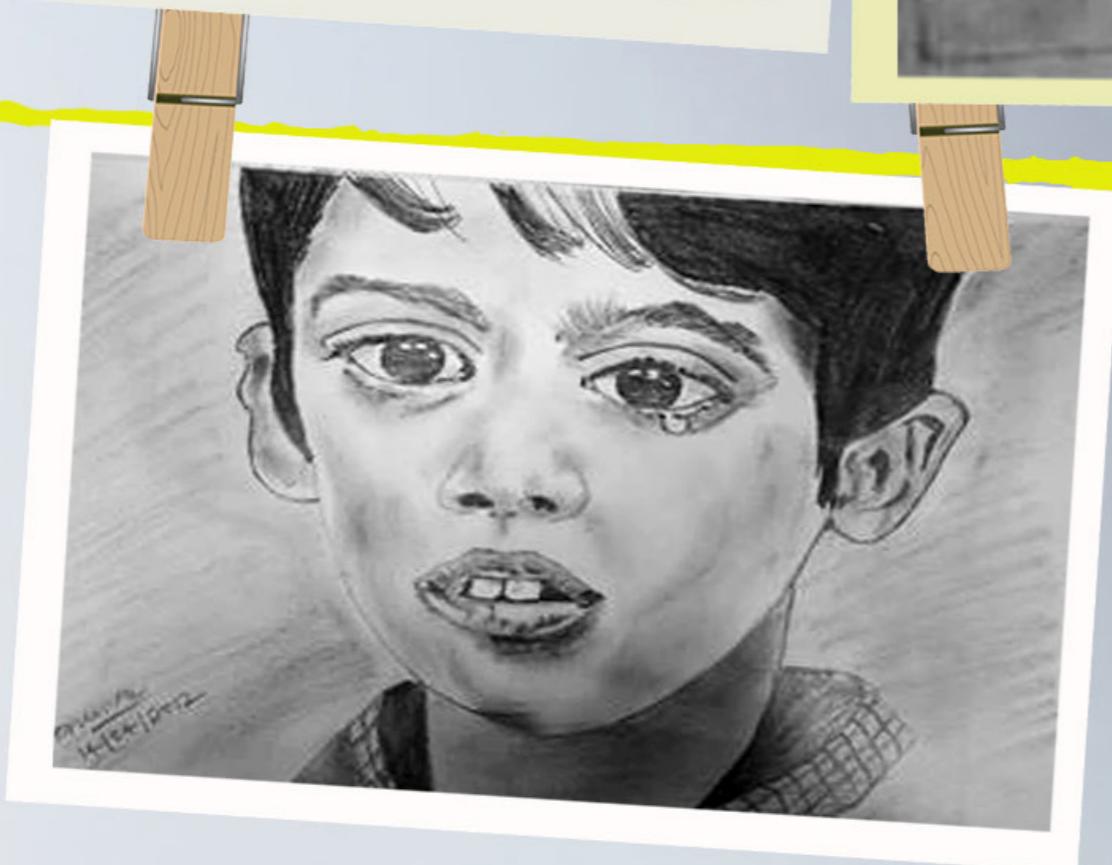
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ऐसा माहोल अब दूर घर में क्यों है ?

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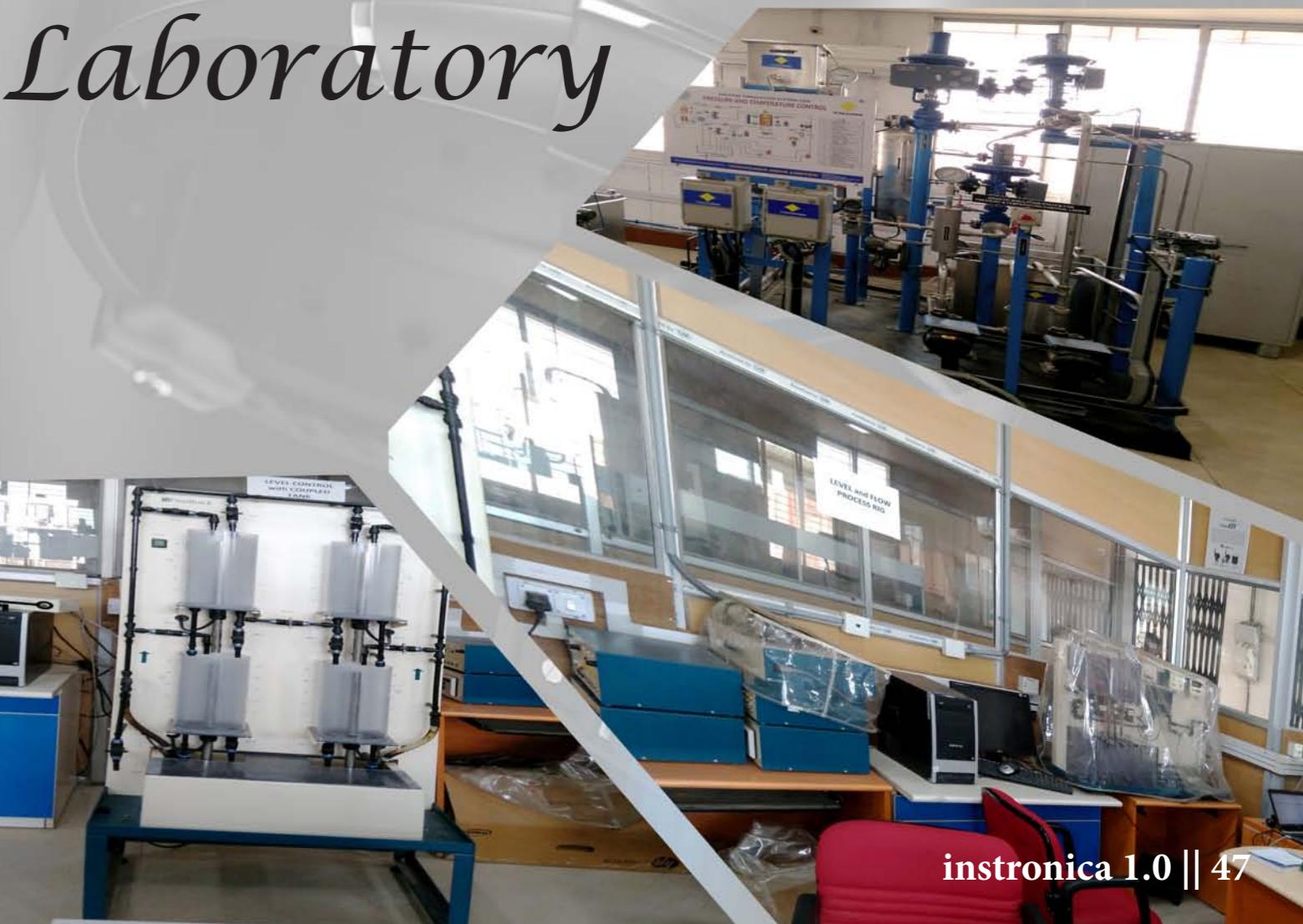
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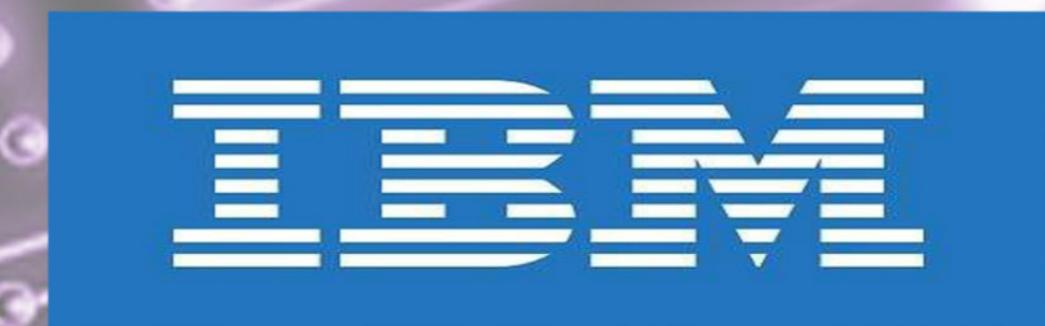
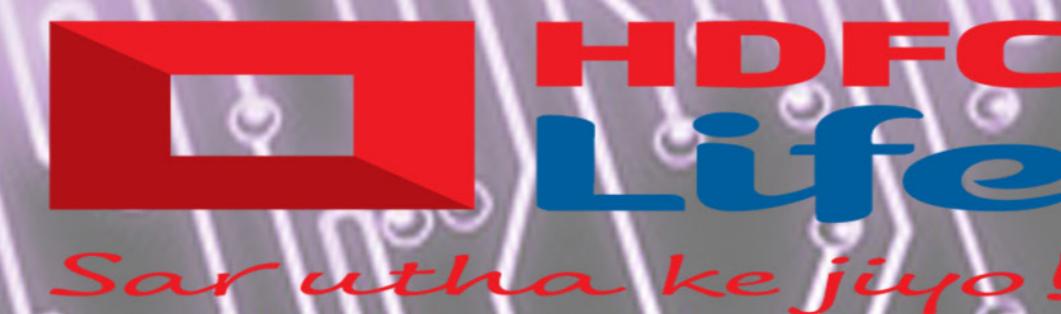


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