

-240V 75 W JANSON 2012

#### AGNISTOK ANNUAL MAGAZINE

#### DEPARTMENT OF ELECTRICAL ENGINEERING

YCCE is one of the pre-eminent foundations of engineering in central India. It is well recognized for its remarkable engineering education and research. YCCE has become the first private engineering college to acquire 'Autonomous' status in Central India. The Electrical Department is one of the well-established departments in YCCE for the last 36 years that is imparting quality education to undergraduate courses with an intake of 120 students and postgraduate courses in Integrated Power Systems supported by facilities like Central Computer Centre, Central Library, Hostel, Gym, Bank, etc. The department also offers a Ph.D. program to promote research activities in the various areas of **Electrical Engineering.** The department has wide research publications in reputed International and National conferences as well as SCI index journals like IEEE Transactions, IET, Elsevier, Journal of Power Electronics, Taylor & Francis, etc. Apart from academic activities, co-curricular activities, sports, cultural and social service activities are taken for students as well as for faculties. The Vision of our department is to emerge as a leading center of learning to groom aspiring electrical engineers into successful professionals by providing contemporary education and intellectual rigor.

#### ABOUT AGNISTOK

DEAR READERS, GREETINGS TO YOU!!

WE, AT YCCE ARE DELIGHTED TO INTRODUCE YOU AGNISTOK - ANNUAL MAGAZINE OF ELECTRICAL DEPARTMENT. FOR THE YEAR 2022-2023, THE 8TH EDITION OF AGNISTOK HAS THE THEME - "INNOVATIONS IN RENEWABLE ENERGY". RENEWABLE ENERGY OFTEN PROVIDES ENERGY FOR ELECTRICITY GENERATION TO A GRID, AIR AND WATER HEATING/COOLING, AND STAND-ALONE POWER SYSTEMS. RENEWABLE ENERGY TECHNOLOGY PROJECTS ARE TYPICALLY LARGE-SCALE, BUT THEY ARE ALSO SUITED TO RURAL AND REMOTE AREAS AND DEVELOPING COUNTRIES, WHERE ENERGY IS OFTEN CRUCIAL IN HUMAN DEVELOPMENT.

AGNISTOK ATTEMPTS TO BRING OUT THE ESSENCE OF CREATIVE WRITING IN STUDENTS, TEACHING FACULTY AND ALSO WELL-WISHERS, IS MORE THAN JUST A MAGAZINE WHERE THE POTENTIALS, TALENTS, ACHIEVEMENTS AND VISION OF OUR COLLEGE GET REFLECTED. THIS IS THAT PROUD MOMENT WHERE OUR TEACHERS AND STUDENTS TAKE PRIDE IN THEIR HARD WORK AND CHERISH THEIR FRUITS OF SUCCESS AND SINCERITY OF THE YEAR THAT HAS GONE BY. IT INDEED RESULTS IN COALESCE AND POSITIVE ENERGY WITHIN US AND WE HOPE THIS ASSOCIATION CONTINUES FOR A LIFE TIME.

WE, AT AGNISTOK BELIEVE THAT EVERYBODY'S THOUGHTS COUNT, AND IT IS THIS THAT INSPIRES US TO WORK HARDER WITH EACH PASSING YEAR AT PUTTING TOGETHER COUNTLESS ARTICLES THAT MIGHT INSPIRE US ALL AND BRING ABOUT CHANGE FOR THE BETTER, AS ALWAYS, WE HAVE INCLUDED SOME COLLEGE ACTIVITY HIGHLIGHTS OF THE PAST YEAR INCLUDING HONORS WON AND STORIES OF STUDENTS. WE HAVE TRIED OUR BEST TO ENCOMPASS ALL THE ASPECTS OF YCCE IN THIS MAGAZINE.

COMING TOGETHER TO A BEGINNING. KEEPING TOGETHER IS PROGRESS. WORKING TOGETHER IS SUCCESS. AGNISTOK- IT IS NOT A ONE-MAN BAND BUT COLLUSION OF DETERMINATION, DEDICATION AND EFFORTS OF OUR TEAM. IT IS NOT A LAST MINUTE JOB BUT YEAR ROUND PROCESS THAT HAS TRANSFORMED THE THOUGHT OF CREATIVE MINDS INTO PROFICIENT YET AESTHETIC PIECE OF WORK. AS SAID, "IT IS ABOUT THE JOURNEY AND NOT THE DESTINATION". WITH A SENSE OF PRIDE AND SATISFACTION WE WOULD LIKE TO SAY THAT WITH ACTIVE SUPPORT OF THE FACULTY AND STUDENTS "AGNISTOK 2023 HAS COME ALIVE. WE ARE GRATEFUL TO ALL OUR TEAM MEMBERS FOR THEIR INVOLVEMENT IN BRINGING OUT THIS ISSUE OF MAGAZINE.

WE BELIEVE THAT OUR EFFORTS WILL STRIKE CHORD TO IGNITE SPARK WITHIN EVERY READER. WE ARE VERY GRATEFUL FOR THE IMMENSE SUPPORT AND FAITH SHOWN BY OUR

वन्देत्वां भूदेवीमार्यमातरं जयतुजयतुपदयुगलं तेनिरंतरम्॥ शुभ्रशरच्यन्द्र-युक्त-चारुयामिनीम् विकसित-नव-कुसुम-मृदुल-दामशोभिनीं मन्दस्मितयुक्त-वदन-मधुरभाशिणीं सुजलां सुफलां सरलां शिववरदां चिरसुखदां मुकुलरदामार्यमातरम्।। वन्दे ०।। १।। हिमनगजाम्स्वाभिमान-बुद्धि दायिनीम् सह-पृतनाम् अमित-भुजाम्-तनय तारिणीम् अमितामित-कोटि-कंठ-जय निनादिनीम्



#### कमलाम्अमलाम्अतुलाम् बल-करणीम्रिपु-हरणीम् मद-दमनीम्आर्यमातरम् । । वन्दे ०।। २ । । धर्मस्त्वं, शर्मत्वं ,त्वं यशोबलम् शक्तिस्त्वं, भक्तिस्त्वं, कर्म-चाखिलम् प्रति सदनं प्रतिमाते, त्वं, महाफलम् धरणी, भरणी, जननीम् कवि प्रतिभाम्मति सुलाभाम् जगदम्बा, राष्ट्र मातरम्। । वन्दे ।। ३ ॥





#### सरस्वति महाभागे विद्ये कमललोचने । विद्यारूपे विशालाक्षि विद्यां देहि नमोऽस्तु ते ॥



#### HON'BLE SHRI DATTAJI MEGHE CHAIRMAN

NAGAR YUWAK SHIKSHAN SANSTHA



HON'BLE SHRI. RAVI D. MEGHE SECRETARY

**NAGAR YUWAK SHIKSHAN SANSTHA** 

HON'BLE SHRI SAMEERJI MEGHE TREASURER

**NAGAR YUWAK SHIKSHAN SANSTHA** 

![](_page_5_Picture_7.jpeg)

#### DR. U.P.WAGHE

#### PRINCIPAL, YCCE

Congratulations to the editorial team for bringing out the 8th edition of the departmental magazine "AGNISTOK".

Their determination and enthusiasm in releasing this issue is a milestone for us at YCCE.

The objective of education is to prepare the young to educate themselves throughout their lives. True education indeed paves the path for the students to learn new things precisely.

It helps them broaden their perspectives and enrich their knowledge to face the globally competitive era. Our students are showcasing their literary talents and writing skills through this magazine and proving to themselves their hitherto untapped talent. Ventures such as this magazine and the other cocurricular activities are directed towards inculcating a sense of responsibility and creating sensitive and versatile professionals of the future. Under the experienced Management of NYSS, Yeshwantrao Chavan College of Engineering (An Autonomous Institution affiliated to RTM Nagpur University) has dedicated and qualified faculty and excellent infrastructure in addition to a committed vision to mold young engineering aspirants for a successful future. Students have boundless opportunities to take advantage of, but with perseverance.

So, my dear students, along with academics, avail of the various opportunities, arid participate wholeheartedly in every project that comes your way. Utilize your talent, polish your skills and you will excel. Your success will be the recognition and reputation of YCCE. The response towards the magazine has been encouraging. I take this opportunity to congratulate the students and other members involved in this magazine for their fruitful efforts. Wishing you all the very best

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![](_page_7_Picture_0.jpeg)

#### DR. S.G.KADWANE

HOD, ELECTRICAL DEPT, YCCE

SOM HOD

An Annual Departmental Magazine 'AGNISTOK' provides a message to rise continuously in each and every aspect of presenting their ideas on common platform. I am happy to see the efforts taken by our bright students and faculty incharge for bringing out this annual issue on Renewable Energy 22-23. This team demonstrated their communication skills, poetic progress, imagination, creativity and technical competence of the contributors.

The theme selected by the editorial members is quite convincing and relevant in today's context.

Nagpur city is becoming a city with global infrastructure with crores of investment in the planning of the development. The prime motive of the infrastructural changes is to create green and distributed energy generation, where electric vehicles with battery plays a significant role.

I congratulate Prof. N.T.Sahu (Faculty Incharge), Kavita Sharma( Editor In Chief), Saksham Tambe (Executive Editor) and entire team and wishing them success in the way of their illuminating path.

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#### PROFINISHA SAHU FACULTY IN-CHARGE

First of all, I would like to congratulate team for successful publication of departmental magazine.

Agnistok is not just a departmental magazine, however is a representation of student's hardwork, departmental view in technical or non-technical aspects, arts, culture, creativity, photography and many more.

Like every year, this year too we have came up with new and different theme. As our department has expertise in non renewable energy and considering the new developments in renewable sector, the theme for the year 2022-23 is " INNOVATIONS IN RENEWABLE ENERGY".

The magazine consists of two sections-

(i) Technical, which exibit the new developments , thoughts and trends in the field of renewable energy.

MESSSAGE FRO FACULTY IN-CHARGE,

(ii) Non-technical, that showcase literature, art and photography.

I take this opportunity to thank our management dignitaries, Honourable Dattaji Meghe, Honourable Samir Meghe sir, Honourable Sagar Meghe sir for their kind support. I would like to convey my sincere thanks to our Honourable principal sir Dr. U. P. Waghe sir for their constant support and guidance. I also thank our HOD Dr. S. G. Kadwane sir for selecting me as a departmental magazine in-charge and having faith in me.

Further, I would like to thank all the faculty members for their support, whether in the form of articles or any other. I thank the non teaching staff for their co-operation. Last but not least, I thank the whole Agnistok core committee whose dedication, hardwork, and sheer perseverance is result of this year's magazine, Agnistok 2022-23.

Hope a spark ignites in youth mind, leading them towards innovations with this journey shown by Agnistok.

Hope you all enjoy reading Agnistok!

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#### KAVITA SHARMA Chief editor

As the editor-in-chief of our annual departmental magazine-AGNISTOK, I am thrilled to present the latest edition of our publication to you. Our team of dedicated student writers, editors, and photographers have worked hard to bring you a magazine filled with informative and engaging content. Being a part of this magazine has been an incredibly rewarding experience, and it wouldn't have been possible without the unwavering support and encouragement of my colleagues and college staff. I have had the privilege of working with a talented and dedicated team of student writers, editors, designers and photographers, who have brought their creativity and passion to the magazine. I have learned a lot during my time as editor-in-chief, and I am grateful for the opportunity to have been a part of such an amazing publication. I am confident that the magazine will continue to thrive and grow under the leadership of my successor. I would like to take this opportunity to extend my sincere gratitude to the Magazine incharge Prof. Nisha Sahu ma'am and Head Of The Department Dr. Sumant Kadwane sir for their unwavering support and guidance. We hope you enjoy reading this edition of the magazine as much as we enjoyed putting it together.

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#### SAKSHAM TAMBE EXECUTIVE EDITOR

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Dear Readers,

"If you want to find the secrets of the universe, think in terms of energy, frequency and vibration."

– Nikola Tesla

## **GNISTOK**

I am happy that after a great Success of Agnistok Magazine (2021-2022) we created new records and maintained the legacy of the magazine as well as bringing new innovations which will help us improve our team work, leadership skills, smart work and the fun of bringing all the ideas and imagination in the magazine. In Agnistok Magazine 2022-2023 I am proud to be an executive

editor and I will fulfil my duties to Innovate the Magazine as well as bring new Ideas and to transform my vision into reality. Being a family we work together and learn together as a mark for the culture. we will continue to carry this torch "Stok" and make its flame "Agni" more brighter and powerful such that it can enlighten the universe as we pass it on to our next Successors, I believe in you because you are the selected one who can only do it and more better and greater than we did, the flame will become more brighter and be proud that you are the one who is carrying it. Agnistok Magazine 2022-2023 is the success of our journey together. We faced many challenges and we cleared all the obstacles on our way together by our thinking and logical skills even having less material we built an amazing decoration and Agnistok is a platform where you can explore your hidden talent as well as develop all the soft skills and technical skills which you can apply in your daily life as well as enjoying the art of compiling a magazine. Wishing you all a happy reading.

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#### Index

## SANKALPANA PLETHORA NAVRITI GARJANA

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## THE PICTURE PATCH THE VISIONARIES

PRABHUTI
KALAVED
ARTISTREAX

#### SANKALPANA "Singularity of Engineering "-Technology

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ADITYA BHENDE (Technical head) ANUSHKA PUSDEKAB (Techical head) SHRIYA WAKULKAR (Technical co-head)

Engineers use technology to solve problems, but they also need to understand and use technology creatively. A career in engineering can provide you with a way of solving the most complex problems that will change the world.

Technology has reduced the effort and time and increased the efficiency of the production requirements in every field. It has made our lives easy, comfortable, healthy,enjoyable and also brought a revolution in transport and communication.

So here we introduce you to "SANKALPANA" the technical section of our departmental magazine " AGNISTOK " . This section has effective collection of technical articles which will surely help you to learn and grow.

MOST EFFECTIVE WAY TO CHANGE THE WORLD

![](_page_12_Picture_11.jpeg)

#### off-grid and grid connected solar PV programme

Off-grid Solar PV Applications Programme is one of the oldest programmes of the Ministry aimed at providing solar PV based applications in areas where grid power is either not available or is unreliable. Applications such as solar home lighting systems, solar street lighting systems, solar power plants, solar pumps, solar lanterns and solar study lamps are covered under the programme. Under the National Solar Mission, a target of 2000 MWp was kept for off-grid solar PV applications. Under the Phase-I of the Mission from 2010-13, a target of 200 MWp was kept against which 253 MWp was sanctioned and under the Phase-II from 2013 – 17, a target of 500 MWp was kept against which 713 MWp has been sanctioned. Under Phase-III of the Off-grid and Decentralised Solar PV Applications Programme, a target of 118 MW has been kept excluding solar pumps which are to be installed under PM KUSUM Scheme and solar home lights which are being taken up under 'Saubhagya' Scheme of Ministry of Power.

Solar pumps are an important component of the solar off-grid programme as it provides reliable irrigation facility in rural/remote areas of the country. Solar photovoltaic water pumping systems can easily meet the irrigation requirements of land holdings for small and marginal farmers. Therefore, solar pumps are being installed to replace the existing diesel pump used for irrigation. Programme was first started by MNRE in the year 1992. From 1992 to 2014, about 11,600 solar pumps were installed in the country.

Government have recently launched a new scheme named Pradhan Mantri Kisan Urja Suraksha evam Utthan Mahabhiyan (PM KUSUM) which aims install new standalone solar pumps in off-grid areas and to solarize existing grid connected agricultural pumps. This will provide farmers with reliable source of irrigation, increase farmers' income and their overall economic status and wellbeing.

Ministry is also implementing a scheme for 70 lakh Solar Study lamps, which aims to provide rural students with high quality and affordable clean light. Scheme is being implemented in 5 states viz., Assam, Bihar, Jharkhand, Odisha and Uttar Pradesh, which have more than 50% un-electrified households, as per census, 2011.

The installation of Solar LED Street Lights ensure ample light in major roads, markets, public conveniences etc. in remote areas and would help the citizens of our country lead a safe and secure life.Solar power sector in India has emerged as a fast upcoming section in last few years. It supports the government agenda of sustainable growth, while, emerging as an integral part of the solution to meet the nation's energy needs and an essential player for energy security.

A target of installing 100 GW of grid connected solar power by 2022 has been kept. In order to achieve the above target, Government of India have launched various schemes to encourage generation of solar power in the country like Solar Park Scheme, Viability Gap Funding (VGF) Schemes, Central Public Sector Undertaking (CPSU) Scheme, Defence Scheme, Canal bank & Canal top Scheme, Bundling Scheme, Grid Connected Solar Rooftop Scheme etc. Various policy measures are also undertaken to promote the grid connected solar power plants.India has achieved 4th rank in the world in solar power deployment. With technological improvements, economy of scale and reduction in solar cell/ module prices ,solar tariff in India is now competitive and has achieved grid parity.

![](_page_13_Picture_7.jpeg)

#### Biomass Briquetting: A Future of Biomass Utilization

The existing burden on biomass resources, the negative impacts on the environment and the problems of energy supply could be alleviated by undertaking comprehensive alternative energy technologies for decentralized application. One of such viable and promising technologies is briquetting, which is used to extract biomass energy and convert it into a more useful form through densification in order to facilitate handling, storage and transportation. Briquette, which is final product of biomass briquetting, has a wide variety of use from household to industrial.

#### • Briquetting

Briquetting is the process of compaction of residues into a product of higher density than the original raw materials. It is also known as densification. The handling characteristics of material for packaging, transportation and storage are also improved. If produced at low cost and made conveniently accessible to consumers, briquettes could serve as compliments to firewood and charcoal for domestic cooking and agro-industrial operations, thereby reducing the high demand for both. Besides, briquettes have advantages over fuel wood in terms of greater heat intensity, cleanliness, convenience in use and relatively smaller space requirement for storage. The briquettes are normally cylindrical or rectangular in shape.

#### Need for Briquetting

A huge quantity of agricultural residues and a major part of it is consumed world-wide in traditional uses. Briquetting is the process of conversion of agricultural waste into uniformly shaped briquettes that are easy to use, transport and store. The briquetting of biomass improves its handling characteristics, increases the volumetric calorific value, reduces transportation costs and makes it available for a variety of application. The biomass briquette is a fuel consisting of biomass, such as agricultural waste or waste paper, bound together and compressed into small pieces approximately 5 to 15cm.

![](_page_14_Picture_6.jpeg)

#### • Types of Briquetting

On the basis of compaction, the briquetting technologies can be divided into:

High pressure compaction, medium pressure compaction with a heating device and low pressure compaction with a binder. At present, there are two high-pressure technologies: Piston press and screw extrusion machines used for briquetting.

#### • Briquettes

Fuel briquettes are essentially a compressed block of organic waste materials used for domestic cooking and heating. The final end product of briquetting process is known as a briquette. Briquettes are made from raw materials that are compacted into a mould. Briquette could be made of different shapes and sizes depending on the mould.

#### Advantages of Briquetting Process

Briquetting process offers a lot of advantages. Some of these are:

- •Briquetting process improves the efficiency of agricultural residues. There is increment in calorific value.
- •Briquetting process helps to solve the disposal and pollution problems
- •Raw materials for briquetting are readily available world-wide, especially in the less developed countries.
  - Limitations of Briquetting Process

As good as briquetting process appears to be, it has the following drawbacks: -

Briquettes can only be used as solid fuels. They have no application as liquid fuel such as the one being used in internal combustion engines

![](_page_15_Picture_13.jpeg)

#### Impact on The Load after the Electric Vehicles Charging Stations Connected to The Grid.

Electric car charging stations connected to the grid in the future belong to grid power loads, it may result in redistribution of power load, causing the trend of change and net loss increases, as shown Nonconforming charging means charging users according to their needs and charge habit, anytime, anywhere to the electric vehicle charging. Coordination charging means as shown in therelevant policy and smart car charger constraint conditions, electric vehicle users in accordance with the needs of an orderly grid charging. According to the research results, the non-coordinated charging conditions, the electric car in the night will be a substantial peak power load connected to the grid, resulting in increased power load and voltage deviation increases, the grid network losses increase, resulting in the transmission efficiency of the grid and decline in the quality and coordination of power charge is based on the grid requires the user as part of the smart grid, passive charging mode, when the grid is in the low load, you can use an electric vehicle charging to balance low, less frequent stopping and starting backup power station power resources frequent scheduling. Grid load curve directly reflects the needs of users, reasonable forecast load curve on the grid schedule and run a very big role in guiding, affect the charging station grid system load curve mainly by the battery charging time and charging decisions, as the charging station a lot of access to the grid, load curve forecasting the traditional mode error may occur, so the impact of electric vehicle charging stations for further simulation load curve analysis. When the charging schedule during non-peak hours to improve the power grid load rate, and arrange charging during peak hours will accelerate grid load rate. Gas stations operate independently and can be different, in order to ensure the safety of the grid, smooth and efficient, electric vehicle charging facilities for energy supply network, intelligent higher requirements while charging.

![](_page_16_Picture_2.jpeg)

In order to improve the efficiency of the power system to minimize the impact of large-scale electric car on the grid, first, power scheduling arrangements for electricity production sector in inches, should ensure enough power margin and power system related electrical equipment in time to upgrade, to ensure the power load increase inch, the device does not overload. Secondly, the power sector can adjust the price reasonable measures to guide and encourage ordinary users to try to preclude the charging of a coordinated strategy to avoid peak charging. With the development of the smart grid, intelligent vehicle terminal will be put into the market, it became part of the electric

power grid steam, according to the needs of the grid charging, and this measure will also provide stable operation of the power system to provide protection.

![](_page_17_Picture_2.jpeg)

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![](_page_17_Picture_4.jpeg)

#### Free Energy Generation Experiments

#### INTRODUCTION

When we talk about Renewable energy, We forgot about free energy sources, the main reason behind it, we accept that there is no free energy because some scientists say's "Without work we doesn't get success".
 But the theory of Perpetual-motion gives use exciting concept and hope about Free Energy Generation .

#### **PERPETUAL-MOTION**

The motion of a hypothetical machine which, once activated, would run forever unless

#### **BHASKARA'S WHEEL**

Bhāskara's wheel was a hypothetical perpetual-motion machine design created around 1150 CE by the Indian

subject to an external force or to wear .

![](_page_18_Picture_8.jpeg)

mathematician/Bhāskara/II. The wheel consisted of curved or tilted spokes partially filled with mercury. Once in motion, the mercury would flow from one side of the spoke to another, thus forcing the wheel to continue motion, in constant dynamic equilibrium. Like all perpetual-motion machines, Bhaskara's wheel is a long-discredited mechanism. To truly overbalance the wheel (so that torque in one direction is greater than the other) and cause motion, the radius of the spokes would have to be altered throughout the course of the wheel's motion. This would have to be done actively, thus consuming energy in the process - and so the machine would cease to be a perpetual-motion engine. It's also important to consider the wheel as it moves, as it can be placed into an overbalanced position so that the math makes it appear that there is an overall torque. It is perfectly possible for the wheel to exert a motion if it is placed off balance (much in the same way a pendulum will swing if moved out of a perfectly vertical position), but that motion does not continue indefinitely and will eventually be counteracted.

#### **DA VINCI'S WHEEL**

![](_page_19_Picture_1.jpeg)

Among perpetual motion inventions, Leonardo's first design is a simple overbalanced wheel. In this design, the weight of the ball bearings within the machine will always shift the wheel's centre of gravity away from the centre point, thereby allowing continuous rotation. The design has 4 tracks in total, each with its own ball bearing running within it.

His second design incorporates levers and a pawl and racket system into the overbalanced wheel. The design of the wheel's central hub is such that the levers are held in a controlled position throughout the

rotation of the wheel. The pawl and ratchet system ensures that the wheel can only rotate counter-clockwise.

His third and most elegant design is for another overbalanced wheel. This design has twelve tracks in total with a ball bearing in each. Once again the centre of gravity is constantly shifted by the movement of the balls along the curved tracks during the rotation of the wheel. This design can be seen in the images above.

#### **Conclusion** :

Today we doesn't have that technology which is able to generate free energy but in future we may have that type of technology, as lots of inventions which happened by proving lots of successful scientists wrong.

![](_page_19_Picture_8.jpeg)

#### **POWERING THE FUTURE OF ENERGY PRODUCTION Abstract**

The best endeavors of humanity happen when we push our limits. With mankind venturing into the future of unparalleled innovations and progress, it lacks safe, low-carbon, and cheap large-scale energy alternatives to fossil fuels. Energy is the only universal currency; it is necessary for getting anything done! Being a "technical adolescent" civilization, the energy requirements to sustain the momentum of development have always been increasing as we improve and modernize our industrial capacity and thus the material standard of living and exploration.

Fusion energy is the only viable way that will satiate the energy needs of the future. the light we see and the warmth that we feel are the results of a fusion reaction in the core of our Sun. in a nutshell the hydrogen nuclei collide and fuse into heavier helium atoms and release incredible amounts

of energy. Harnessing this tremendous potential will be perhaps the greatest achievement of mankind.

#### [Some proposed fusion reactions for fusion reactor]

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When fused together in a controlled way, the atoms release nearly four million times more energy than any chemical reaction in burning coal, oil gas, etc, and four times more than nuclear fission. The basic principles of fusion science lie in plasma physics. At extreme temperatures, the electrons are stripped off from the atoms and the gas becomes plasma composed of positive nuclei and negative electrons. Plasmas create the ambient conditions in which we can fuse light elements thus yielding energy. The three conditions must comply in order to sustain fusion: extreme temperatures; sufficient plasma density; and sufficient confinement time to hold and sustain the plasma. A device called tokamak is used to confine the plasma using magnetic fields in a hollow toroidal shape. The heat released in fusion absorbed by the walls of tokamak would be used to drive the steam turbines and generators.

![](_page_21_Picture_1.jpeg)

From engineering perspective, tokamaks are a big engineering challenge as the parameters of stresses on design and materials comes into play with the presence of millions of amperes of currents, strong magnetic fields, extreme temperature differences, vacuum chambers, geometry of the tokamak, efficiency etc. But the art of creating a mini sun in a reactor hasn't yet been mastered.

Problems arise in plasma heating, plasma stability, confinement and exhaust of energy and particles, alpha particle heating, fusion reactor materials, reactor safety, and environmental compatibility. These technological challenges need a bright engineering perspective and innovation to make it a successful resource.

Soon fusion energy will be the pillar to hold our energy demands but Producing it would require grasping the creative forces, and technological skills of the scientific and engineering community all around the world and it stands as the biggest holy grail of energy for mankind.

![](_page_21_Picture_5.jpeg)

![](_page_21_Picture_6.jpeg)

![](_page_22_Picture_0.jpeg)

Cryptography is a method of protecting information and communications through the use of codes, so that only those for whom the information is intended can read and process it.

In computer science, cryptography refers to secure information and communication techniques derived from mathematical concepts and a set of rule-based calculations called algorithms, to transform messages in ways that are hard to decipher.

#### CRYPTOGRAPHY TECHNIQUES

Cryptography is closely related to the disciplines of cryptology and cryptanalysis. It includes techniques such as microdots, merging words with images and other ways to hide information in storage or transit. However, in today's computer-centric world, cryptography is most often associated with scrambling plaintext (ordinary text, sometimes referred to as cleartext) into ciphertext (a process called encryption), then back again (known as decryption). Individuals who practice this field are known as cryptographers.

#### Modern cryptography concerns itself with the following four objectives:

- 1√ Confidentiality:- The information cannot be understood by anyone for whom it was unintended.
- 2√ Integrity:- The information cannot be altered in storage or transit between sender and intended receiver without the alteration being detected.
- 3√ Non-repudiation:- The creator/sender of the information cannot deny at a later stage their intentions in the creation or transmission of the information.

4. Authentication:- The sender and receiver can confirm each other's identity and the origin/destination of the information.

Procedures and protocols that meet some or all of the above criteria are known as cryptosystems. Cryptosystems are often thought to refer only to mathematical procedures and computer programs; however, they also include the regulation of human behaviour such as choosing hard-to-guess passwords, logging off unused systems and not discussing sensitive procedures with outsiders

![](_page_23_Picture_0.jpeg)

Cryptosystems use a set of procedures known as cryptographic algorithms, or ciphers, to encrypt and decrypt messages to secure communications among computer systems, devices and applications.

A cipher suite uses one algorithm for encryption, another algorithm for message authentication and another for key exchange. This process, embedded in protocols and written in software that runs on operating systems (OSes) and networked computer systems, involves:·public and private key generation for data encryption/decryption ·digital signing and verification for message authentication ·key exchange

![](_page_23_Picture_3.jpeg)

1√Symmetric Key:- Key encryption algorithms create a fixed length of bits known as a block cipher with a secret key that the creator/sender uses to encipher data (encryption) and the receiver uses to decipher it. One example of symmetric-key cryptography is the Advanced Encryption Standard (AES).

In June 2003, AES was approved by the U.S. government for classified

- information. It is a royalty-free specification implemented in software and hardware worldwide. AES is the successor to the Data Encryption Standard (DES) and DES3. It uses longer key lengths -- 128-bit, 192-bit, 256-bit -- to prevent brute force and other attacks.
- 2/Public-Key or Asymmetric Key:- Key encryption algorithms use a pair of keys, a public key associated with the creator/sender for encrypting messages and a private key that only the originator knows (unless it is exposed or they decide to share it) for decrypting that information.

![](_page_23_Picture_8.jpeg)

#### SAND BATTERY

#### A "sand battery" is a high temperature thermal energy storage that uses sand or sand-like materials as its storage medium. It stores energy in sand as heat.

![](_page_24_Figure_2.jpeg)

Its main purpose is to work as a high-power and high-capacity reservoir for excess wind and solar energy. The energy is stored as heat, which can be used for heat homes, or to provide hot steam and high temperature process heat for industries that are often fossilfuel dependent.

It stores energy in the form of heat. The heat can be converted back to electricity using turbines like

**MOHTESHIM SHAIKH** 

EL-3RDYR

ORC-turbine or a steam turbine. This requires additional investments to the turbine technology, and the conversion in electricity has inherent losses, thus complicating the economical side.

Heat is contained within a 4 m wide and 7 m high steel container that contains Polar Night Energy's automatic thermal energy storage system and 100 tons of low-grade sand. The sand used is durable and cheap, and it can store a lot of heat when it is contained in a small volume and heated to around 500 °C or 600 °C.

The sand battery has the capacity to store around 100 kW of heating power in addition to 8 MWh of energy storage.

In Our India , We Can Do This Very Easily In Hot Places Of India. Such As Nagpur , Chandrapur , And Most Heated Place Titlagarh bcuz The Temperature Is Raises 42 Degree Celsius Especially In Summer So , We Can Easily Heat-up The Sand By Some Solar Energy Which Is Generated By A Sun Radiation. Which Is Stored In The Form Of Heat And Then It Will Used As Per Demand By Converting Heat Energy Into Electricity.

As the world shifts towards higher and higher renewables fraction in electricity production, the intermittent nature of these energy sources cause challenges to energy networks. The sand battery helps to ambitiously upscale renewables production by ensuring there's always a way to benefit from clean energy, even if the surplus is massive.

### ENGLISH SECTION PLETHORA @

![](_page_25_Picture_1.jpeg)

![](_page_25_Picture_2.jpeg)

![](_page_25_Picture_3.jpeg)

**REWA DHANDE** ENGLISH EDITOR

SHRUTI DOIFODE ENGLISH CO-EDITOR

PRUTHA TATHE ENGLISH CO-EDITOR

#### Plethora,

#### Abundance of something .

The best of the work is evident when a group of people collaborate with the same zest and expertise to accomplish a shared goal or effective results. There are many writers between us with ingenious brains and ambitions to get their work published, but are struggling simply because of unfamiliar procedure. The content on the following pages is a series of one's suggestive talks rather than scholarly discourse. Our primary goal has been to add positive values.

The more that you read ,the more things you'll know. The more that you learn, the more places you'll go! We hope you'll enjoy reading !

#### IT'S OKAY TO NOT BE OKAY!

Let me begin by posing a simple question; do we always have a tendency to hold onto anything(a feeling, an item, etc.)indefinitely? The majority of us will undoubtedly respond "no" to this question. Whenever you are upset or going through a challenging scenario, the people around you will always cheer you up. However ,have you ever noticed that everyone will tell you to be optimistic ? This advice is not actually incorrect. Having an optimistic attitude towards life is also important. But is keeping an optimistic outlook necessary at all times ? I don't think it's possible ;you can't always be happy . The magnificent journey of your life will take you through a lot . you will experience many different feelings and emotions since life will never going to be perfect. Experiences both good and bad are the essence of life. Sometimes IT'S OKAY to feel sad, agitated, anxious.t times IT'SOKAY to feel these images. Without, we would be lacking in several important aspects of life. It's completely fine if there are moments when you don't feel as optimistic as you have been in many of your life's circumstances since forcing yourself to remain optimistic will serve no use. Accepting the reality can sometimes make tough situations easier to handle. There will be times when you'll feel insecure, misled or disliked. Feel these emotions instead of suppressing or avoiding them by pretending to be positive .your heart understands everything ,but your mind is only trying to get it to be happy and ignore what you're going through. These feelings and experiences are a part of who we are. Whether they are good or bad, they will always improve you as a person and teach you something about life. Stop ignoring these emotions and sentiments and start embracing them. Talk to yourself as you are your own best friend and no one can understand you better than your own self. Talk it out or cry it out just don't suppress these emotions and try to learn from them .lastly always remember

#### **IT'S OKAY TO NOT BE OKAY!**

-Shruti Doifode 2nd year, Electrical

#### **LESSON FROM NATURE**

The weather is warm in a winter morning, So I'm dripping the sun mid-morning, Growing stronger with the ray that meets mine, The sky is clear and serene just like my mind, The beauty of nature is making be blind. The tress are standing tall with birds over them all Telling me to stand strong and be fearless of all, The birds are chirping a beautiful song, Striking me to touch the sky and still be norm.

-Sejal Mohadikar Electrical, 2nd year

#### MYTOWN

Chandrapur is mine. **Everything is fine.** Tadoba sanctuary is near. But we don't have wild animals fear. It is a historic place, Because of Mahakali's bliss. There is some pollution But we are finding some solution. We will surely become pollution free When everybody in Chandrapur will plant at least one tree. Chandrapur has four gates. All people are living as home mates. It grows in beauty year by year, Black gold is also found here. Joy is everywhere ,everywhere.

> -Nikhil Somalkar Electrical , 3rd year

![](_page_26_Picture_10.jpeg)

#### LOVE YOURSELF

Try to love yourself, More close to your eyes. Love your body, Your smile, Your attitude, Your skin Your face, Your weight Your colour. Exhale out the negativity And inhale the positivity Accept yourself as you are

> - Vaishnavi Dhote Electrical, 3rd year

#### **DREAM ON**

Dream on, dream on, until we settle .

But what the point of settle, if we are just a point of atom. Make it a living, cause its just a life.

Being made by us, survive by one. Be the title track, that's it make . Dream on, dream on, until it's real. Without a reel, faith on.

> -Tejaswini Ghodichor Electrical, 3rd year

#### THE WINTER STORM

You are like a winter storm not a winter berries, Not fresh but dark and furious, Expectations splatter so hard on my face, I am in confusion and frustration, Making me freeze in extreme cold, The entire world in falling apart, But you are not here to same me for a part,

> Not wintery days, but you are, The rainy season that I like so far.

-Asawari Nagre 2nd year,Computer Technology

#### DAWN

The mood has dwindled, Sky is painted in golden A hurricane of birds left their eyrie, To prepare for the day's hurdle, Sunlight is passing through the dewdrops, Creating a rainbow hues over leaves, Lil buds are blooming on the sunkissed trees, With leaves rustling along the morning breeze, The beauty of drawn is so alluring, It makes the day look more promising.

#### SURVIVAL

It's been a few months, Two seasons passed by , The plant near my window stopped growing, I thought she was saying goodbye, But today as I observed meticulously, New leaves are sprouting, She survived the trembling cold and, The summer that was blistering, Only after going through these adversities, She could enjoy the drizzle and will grow high, So, I thought to myself that, "If she can survive, then so could I."

2nd year Computer Technology

![](_page_27_Picture_17.jpeg)

#### **KNOWING YOUR GUTS**

This earth undergoes multiple changes each and every succeeding second and who really aspires to have a meaningful life must pace upto it. One never creates its own new position but takes the position of a less talented person. The most real and less popular truth is that there is no individual born without talent.

A person can have single or numerous talents. But the reason why anyone gets into depression is their guts and growing apprehensions of the world. The most funny fact is that a person limits himself/herself. Because of fear and due to this poisonous plant of fear, we supposedly might not have tried the activity we can be best at.

Our thoughts and actions are something influenced by our teachings and most importantly experience. Children with optimistic surroundings always have a broad mindset, whereas one with conflicting surroundings often have a dilapidated mindset. Society praises one who can tolerate its criticism because in this competitive world, when one tries to attain heights there are many to pull their legs and decelerate their development. At each step of life we are judged, but in that situation to become deaf is the supreme choice. The most common evidence of this can be viewed in schools, the students being active and enthusiastic at studies are verdicted to be praised more whereas others are denoted liable. But such a conclusion is complementary to judge fish for its flying ability and frog for its walking ability. One who realizes its merits and demerits can work on it and definitely can be successful.

In early times owning button phones were considered a sign of aristocracy but at present it is left as a token of poverty and therefore with respect to time people must update themselves and bring out new in themselves. This justifies the saying that successful people don't do different work but they do the work differently. Having uniqueness is a necessity. Because neither every cricketer can become Sachin Tendulkar nor every athlete can become Usain Bolt.

Being second is never an option by God's grace, we all are unique.

- DISHANT SAYANKAR ZND YEAR ,ELECTRICAL

#### THE ENDLESS EXPEDITION

The aimless me, On a vain road If there is something, The beauty of Adobe.

Wondering the world, With a perfect shout. Wondering the world, With a speech less loud.

Wondering the aura, Stays as it is. Wondering the world, To change a little bit. But wonders are just a opinion With an unpredictable what? It's like a journey, With never ending thought.

At once we will cross the thoughts. At once we will accept the what's. At once we can get changed. But at the end the journey will be a mess.

A journey is too short to express. A journey is too short to explain. But just remember one thing, It's a journey from heaven to heaven. -Shriya Karanjekar 2nd year,Electrical

![](_page_28_Picture_14.jpeg)

#### THE ENDLESS EXPEDITION

The year was 1942, time of Quit India Movement. On 2nd April, just before three months to this movement, in the village of Basantpur (Present day Bihar), was born the child prodigy. He received his primary and secondary education from Netarhat Residential School, adopting the system like Gurukul. He was a brilliant genius solving the college problems in 9th standard itself. Not only in mathematics but he was also good in acting, making him multitalented. After securing the First rank in primary and secondary education, in 1961 he took admission in Patna Science College, one of the prestigious colleges in India. Only 3 students were admitted from school to the university and he was one of them. Once he was sent to the principal's office, asking him to solve the questions. He not only solved all the questions but also in numerous methods and left everyone shocked. In no time he became famous as a legend in mathematics. During the first year of BSc Mathematics, he was allowed to appear for the final exams. To everyone's surprise he topped the examination. And the same happened in MSc also. At the age of 21, he completed his dual degree i.e., BSc and MSc.

While studying in college, he was recognized by John L. Kelley. After solving some of the difficult questions, John was really impressed by his talent and requested him to complete his further studies in America. Then the journey of the magician started. He flew to America. He joined the University of California, Berkeley and completed his PhD in 1969, under doctoral advisor John Kelley. After completion of his PhD, he worked for NASA. It is said that, when the computers broke down during the ongoing mission of Apollo, he performed the calculations manually and when the system was online, all the calculations were correct.

He married to Vandana Rani Singh in 1973 and was also suffering from Schizophrenia. After returning from America in 1972, he worked with top most prestigious colleges of India like IIT Kharagpur, TIFR Mumbai, ISI Kolkata. His wife noticed the abnormal behavior, after which she decided to separate. In 1976, they divorced which resulted in his first mental breakdown. He suffered from his second breakdown when most of his calculation and theory papers were stolen. In 1974, he suffered first epilepsy and was admitted in Ranchi in 1976. After discharge during his journey to home he disappeared and years later he was found in very miserable condition in Saran district, Bihar. In this condition also, he was reciting the theorems of Mathematics. Although he was in ailment state, he never distanced himself from Mathematics. His love, his affection towards mathematics took him to great heights. He didn't get any recognition neither from the people nor from the Government amid such achievements. It is said that, if he had his theory, it was capable enough to win the Nobel Prize. On 14th November 2019, he died at PMCH Patna. His cold body was waiting for an ambulance in the veranda of the hospital for nearly 2 hours.

He was the maths wizard who, in the 60's, streaked a path from Bihar to Berkeley. Sometime soon after, he slipped into mental illness, leaving behind a thesis, a few letters, some scribbles on the wall, and a million questions. He was the son of Lal Bahadur Singh & Lahaso Devi. He was none other than

#### **'VASHISHTHA SINGH NARAYAN'**

**Dhruv** Lambat 2nd year, Computer Technology

![](_page_29_Picture_7.jpeg)

![](_page_30_Picture_0.jpeg)

![](_page_30_Picture_1.jpeg)

![](_page_30_Picture_2.jpeg)

हिंदी -विश्व की प्रमुख और राष्ट्रीय भाषा। इसका क्षेत्र बहुत ही विशाल है तथा इसकी अनेक बोलियां हैं। यह भाषा विश्व में सबसे ज्यादा बोली जाने वाली तीसरी भाषा है। यह दुनियाभर मे हमे सम्मान दिलाती है।हम अपने विचारों को बड़ी सरलता से इस भाषा में दीर्घ रूप या लघु रूप में प्रकट कर सकते है।इसलिए हमने भी इसी भाषा में ऊर्जा का महत्व तथा इसका भविष्य में क्या लाभ हो सकता है इसका उल्लेख हमने लघु रूप में किया है। "ऊर्जा रक्षा पर करो विचार,

हमें देता यह सुविधापूर्ण जीवन जीने का आधार"।

हरित ऊर्जा दुनिया के भविष्य का हिस्सा बनती दिख रही है जो आज के कई ऊर्जा स्रोतों के लिए एक स्वच्छ विकल्प पेश करती है। तथ्य यह है कि जीवाश्म इंधानो को अतीत की बात बनने की जरूरत है क्योंकि वे हमारी ऊर्जा जरूरतों को स्थायी समाधान प्रदान नहीं करते। हमारी जरूरतों को पूरा करने के लिए ऊर्जा स्रोतों को एक साथ लाकर,

' नवरीति ' संसाधनों का उत्पादन और विकास के संबंध में की जा रही प्रगति के साथ , यह मानने का हर कारण है कि जीवाश्म ईंधन को चरणबद्ध किया जा सकता है।

"अग्निस्तोक " आपके लिए लाया है यह नया उन्नत स्थान ' नवरीति ' जहां आप सभी ऊर्जा से संबंधित अपने विचारों का उल्लेख हिंदी भाषा मध्यम के द्वारा कविता, लेख या लघु कथाओं द्वारा प्रस्तुत कर सकते हैं।

वकास पथ पर भारत 15 अगस्त 1947 को सैकड़ों वर्षों के दमन, अत्याचार, शोषण और पराधीनता के कुत्सित पंक से एक पंकज प्रस्फुटित हुआ था- 'स्वतन्त्र-भारत'; स्वतन्त्र और स्वाभिमान से गर्वोन्नत भारत, विश्वभर के स्वाधीनता संग्रामों की आशाओं का आकाश-दीप भारत। तब से आज तक हमारा भारत निरन्तर विकास के पथ पर अग्रसर हो रहा Ŝ आज हमारे राजनेता भारत को शीघ्र ही महाशक्ति बनाने का सपना देखने लगे हैं। शिक्षा के क्षेत्र में-अशिक्षा के कलैक को मिटाने का भी देश में अथक प्रयास हुआ है। प्राथमिक शिक्षा अनिवार्य कर दी गई है। प्रौढ़ शिक्षा जैसे आन्दोलन भी चलते रहे हैं। शिक्षा को मौलिक अधिकार बनाने का कानून पारित हो चुका है। उपसंहार - अन्त में यही कहा जा सकता है कि देश ने हर दिशा में विकास किया है। विश्व में भारत की विश्वसमीयता बढ़ी है, किन्तू अभी मँजिल दूर है। अर्थशास्तियों ने देश को विकसित राष्ट्रें बनाने के लिये कुछ मूलमन्त सुआए हैं किन्तु आज की कुटिल राजनीति, सत्ता लोलुपता और जनता का दिग्ध्रमित रूप इसे साकार होने देंगे, इसमें सन्देह है।

-शर्वरी संजय हटवार

![](_page_32_Picture_0.jpeg)

लक्ष्य की ओर अग्रसर कुछ करना है तो डटकर चल, थोड़ा दुनिया से हटकर चल। लीक पर तो सभी चल लेते हैं, कभी इतिहास को पलटकर चल।

बिना काम के मुकाम कैसा , जब तक हासिल ना हो मंज़िल, तो राह में आराम कैसा ।

अर्जुन सा निशाना रख , मन में ना कोई बहाना रख। लक्ष्य सामने है, उसी पर अपना ठिकाना रख।

सोच मत , साकार कर,

मिजित) हारी हूँ, हार मानी नही है , जितने की जिद्द अब भी बाकी है। लंबी उडान भरनी अब तो बाकी है। क्या हुआ पहला कदम फिसला तो, हजारों कदम चढ़ना अब भी बाकी है। राँसते बदल दिए है मंजिले नही, रूठी हुई किस्मत को जगाना बाकी है। सपनो के पीछे दौड रही हूँ, सपने पाना अब भी जारी है।

> अपने कर्मों से प्यार कर। मिलेगा तेरी मेहनत का फल, किसी ओर का ना इंतज़ार कर।

जो चले थे अकेले, उनके पीछे आज भी काफ़िले हैं। जो करते रहे इंतज़ार, वो ज़िंदगी में आज भी अकेले है।

- शुभांगी फूले

>32

मुशकिले तो आएगी बहुत रौस्तो पर , मुशकिलो का सामना करना जारी है। कई मोड़ आ गए,रास्ते बदल दिए , लेकिन मंजिल को पाना जारी है।

- मयूरी खोब्रागडे

#### इंसान का व्यक्तित्व

अक्सर कई लोग उन लोगों के बीच बैठना पसंद करते है जो सिर्फ उनकी झूठी तारीफ करते है। लेकिन आप बस एक बार उनसे अपने लिए मदद की उम्मीद करके देखिएगा। आप खुद समझ जायेंगे वो हमारे हितेषी है या नहीं। नीम कड़वा जरूर होता है पर ज्यादातर, बीमारियों में नीम हकीम है। कुछ लोग नीम की तरह होते है .लेकिन वो ही आपके सच्चे हितेषी भी होते है।

ऐसे लोगों से हमेशा आपको फायदा ही मिलता है। क्योंकि उनको, जब आपकी बुराई करनी होती है तो वो आपके पीठ पीछे नही बोलेंगे। बल्कि वो आपके सामने हो आपकी बुराई कर देंगे। उनकी बातें बिलकुल सच होती है।

अब मैं बुरे लोगों की बात करू तो वो नकारात्मक बात तुरंत पकड़ते है और जब हम उनके साथ रहते है. तो हमारे अन्दर भी वो ही नकारात्मक भाव पनपने लगते है।

हमारी सोच भी उन्ही के जैसी होने लगती है। क्योंकि एक दूसरे मे घुलने-मिलने के लिए हमें भी उनके जैसा बनना पड़ जाता है। ये मानव की प्रकृति है की वो नकारात्मकता की ओर जल्दी ही आकर्षित हो जाता है। जिसका प्रभाव उन्हें तब दिखाई पड़ता है जब कोई उनकी आशाओं को रोधकर उनसे आगे निकल जाता है।

कई बार तो इतनी देर हो चुकी होती है की मुकाम हाथ से पूरी तरह निकल जाता है। जो लोग मीठा बोलते हैं. आपको उनसे सतर्क रहने की जरूरत है। हो सकता है की वो आपके हितेषी ना हो। मै ये नहीं कहती की सभी लोग एक जैसे ही होते है। कुछ लोग आपकी परवाह करने वाले भी होंगे। इसी उम्मीद के साथ की आपको मेरे इस प्रेरणादायक, लेख से कुछ सीखने को मिला। आप प्रतिक्रिया ज़रूर दे।

![](_page_33_Picture_5.jpeg)

![](_page_33_Picture_7.jpeg)

कोशिश कर, हल निकलेगा। आज नहीं तो कल निकलेगा। अर्जुन के तीर सा सध, मरूस्थल से भी जल निकलेगा ।। मेहनत कर, पौधो को पानी दे, बंजर जमीन से भी फल निकलेगा। ताकत जुटा, हिम्मत को आग दे, फौलाद का भी बल निकलेगा। जिन्दा रख, दिल में उम्मीदों को, गरल के समन्दर से भी गंगाजल निकलेगा। कोशिशें जारी रख कुछ कर गुजरने की, जो है आज थमा थमाँ सा, चल निकलेगा॥ - जाह्ववीं ठोसर

![](_page_33_Picture_9.jpeg)

तुझे पाकर, पूरा हुआ जीवन का लक्ष्य ।

जब जब देखू तुझे, भर आता है मेरा मन । ऐसी ही माँ मिले मुझे, हर जनम,जनम ।

जो मन में सदा से है तेरे, वो हर इच्छा मैं पूरी करू । कभी छूट ना जाए वो ख्वाहिश , जिसे मैं पूरा ना कर सकू ।

तेरी खुशी ,प्यार और ममता, हर दिन मैं देखू । कभी टूट ना जाए ये पल , ऐसी दुआ है मेरी रब को ।

कहा छूट ना जाए आचल, इसलिए रहना है साथ हर पल । तेरी खुशी ,प्यार और ममता,

एक डोर से बंधा आंचल, तेरे गोद में गुज़ारू हर पल । कही छूट ना जाए आंचल, इसलिए रहना है साथ हर पल दुनिया का सफर

निकले थे घर से आँख मे लेकर, एक छोटासा सपना सही राह दिखाने । इस भीड भरी दुनिया मे सोचते थे, मिल जाएगा कोई अपना ।

दुनिया की उम्मीदों का बोझ , और मेरी माँ का था ,एक छोटासा सपना । दुनिया दिखाने के लिए पापा ने कंधा, मेरे नाम कर दिया अपना। इस रंगीन दुनिया में, अलग अलग रंगीन थे लोग । किसीने दिखाया अपनापन, तो किसी ने दिखाया दौलत शौहरत का रौब। समज चुके थे हम, इस दुनिया मे जिने का तरीका

संभालाखुदको । और बदल डाला दुनिया से पेश आने का सरीका ।

ठान रखा था हमने भी, करेंगे सपना साकार माँ-पापा का।

और अपना इस भीड भरी दुनिया में, सोचते थे मिल जाएगा कोई अपना ।

तेरी दुआ है इतनी पक्की, के मिले यह सातों जनम। -मेरी प्यारी माँ......

- अमर धनकुटे

-साक्षी.अ. नौकरिया

#### कोरोना महामारी और शिक्षा

कोविड- 19 ने मानव जीवन के सभी वर्गों को प्रभावित किया है। जबकि इसने सभी उद्योग क्षेत्रों को प्रभावित किया, इसका शिक्षा पर बड़ा प्रभाव पड़ा। रात के भीतर कक्षाओं को ऑफलाइन से ऑनलाइन कर दिया गया था, लेकिन इससे छात्रों में भ्रम की स्थिति पैदा ही गई, खासकर उन छात्रों के लिए जो कॉलेजों में प्रवेश करने वाले थे। स्थिति बेहतर होने की उम्मीद में छान्नों ने एक साल का अंतराल भी लिया। अब सरकार की तरफ से भी संसद को बताया गया है कि कोविड- 19 ने किस कदर शिक्षा को प्रभावित किया है। सरकार से सदन में सवाल किया गया था कि कोविड- 19 महामारी ने देश में प्राथमिक और सेकेंड्री शिक्षा के स्तर को किस तरह से प्रभावित किया है। क्या सरकार ने शिक्षा पर कोविड के स्तर को महसूस किया है और उच्च स्तर पर महामारी का कितना असर हुआ है? इस सवाल के जवाब में केंद्रीय शिक्षा मंत्री धर्मेंद्र प्रधान की तरफ से कहा गया कि शिक्षा, संविधान की मूलभूत अधिकार है। इस बात को ध्यान में रखते हुए ज्यादातर स्कूलों और कॉलेजों के साथ ही यूनिवर्सिटीज का ध्यान महामारी के दौरान रखा गया है। उन्होंने कहा कि महामारी के फैलने पर स्कूलों, कॉलेजों और यूनिवर्सिटीज की शिक्षा पर भी खासा असर पड़ा है। स्कूलों और कॉलेजों को महामारी को देखते हुए बंद करना पड़ा था। इसकी वजह से सिखने की प्रक्रिया प्रभावित हुई। साथ ही देशभर में शिक्षा प्रणाली भी प्रभावित हुई ।

-निधि कोरे

![](_page_34_Picture_18.jpeg)

![](_page_35_Picture_0.jpeg)

स्त्री वो लड़की है, वो लड़की है तो क्या हुआ, उसे भी पढ़ने दो।

आशा संघर्षों से भरी इस जिंदगी में तुम हौसलों के बांध को टूटने मत देना ।

चाहे हो कितना भी अंधेरा तुम, उम्मीद के दीये को बुझने मत देना। काली संघर्षशील अंधेरी रात वो मेहनत करना चाहती है , उसे भी इस दुनिया से लड़ने दो, कमाना सिर्फ मजबूरी में नहीं होता।

घर के खर्च में वो हाथ बटाना चाहती है, उसे भी नौकरी करने दो।

वो भी एक आज़ाद पंछी है, उसे भी उड़ने दो ।

के बाद ही आएगा खुशियों भरा सवेरा।

तब तक रख कर हिम्मत तुम, सब्र का साथ छुटने मत देना।।...

-शाश्वत गोवर्धन

वो एक लड़की है तो क्या हुआ , वो एक इंसान भी है । तुम अपनी सोच बदलो ।

वो लड़की है तो क्या हुआ, ये दुनिया एक तलब है, उसे भी तैरने दो।

-आमीन खान

![](_page_35_Picture_13.jpeg)

#### मराठी विभाग ..

#### रो ह न ख रे (म रा ठी सं पा द क)

गर्जना मराठी मातीची, गर्जना मराठी संस्कृतीची,

![](_page_36_Picture_3.jpeg)

गर्जना तुमच्यातील दडलेल्या सुप्त कलागुणांची. शिवरायांच्या विचारांनी पवित्र झालेली बोली म्हणजे मराठी, पणज अग्नीच्या कसोटी वर पेटलेला संघर्ष म्हणजे मराठी, ता साहस ज्या कसोटी वर पेटलेला संघर्ष म्हणजे मराठी, ता साहस परकीयांचे आक्रमण सहन करून उभी राहिलेली मराठी, पास्त नैराश्या मध्ये मनाला ऊर्जा देणारी माय मराठी, 14 सन्त सह्याद्रीच्या दऱ्या खोऱ्यात वाहणारी प्रेरणा म्हणजे मराठी, अभिमान व स्वाभिमान असलेली माझ्या महाराष्ट्राची मराठी.

सेजल मोहाडीकर (मराठी सहसंपादक)

गर्जना विचारधारेची,

गर्जना महाराष्ट्राच्या परंपरेची,

ही गर्जना स्वप्नांची, मराठी मनाची,

विचारांची लढाई ही फक्त विचारांनी लढली जाते, आयुष्याच्या वळणावरती संघर्षाची कसोटी पाहिली जाते.

अंधारलेल्या रात्रीत मी प्रकाश ज्योतीचा, संघर्ष माझ्या रक्तात कारण मी महाराष्ट्राच्या मातीचा.

![](_page_37_Picture_2.jpeg)

हा विचार जसा धगधगता ज्वालामुखी कारण, विचार माझा शिवरायांचा, शून्यातून निर्माण झालेल्या स्वराज्याचा.

संघर्ष हा मान न झुकवणाऱ्या छत्रपती संभाजी राजांचा मी विचार शिव -फुले -शाहु -आंबेडकरांचा, जणु अन्याया विरुद्ध, पुकारलेल्या बंडाचा.

![](_page_37_Picture_5.jpeg)

![](_page_37_Picture_6.jpeg)

हा विचार मराठी मातीचा, हा विचार मराठी स्वाभिमानाचा, राखे मधूनही ज्वलंत होऊन गगनझेप घेईल असा हा विचार सहाद्रीचा.

> शिका -संघटित व्हा आणि संघर्ष करा मूलमंत्र क्रांतीचा, त्या क्रांती साठी प्राणपणाला लावू हा विचार आंबेडकरांचा.

हे विचार जणु जगाच्या इतिहासातील लखलखता तारा, प्रत्येक भारतीयाच्या मनात पेटत राहील महापुरुष्यांची विचारधारा !

![](_page_37_Picture_10.jpeg)

#### 

शिक्षणाने माणूस समध्द होतो आम्ही आहोत अजूनही भ्रमात उच्चविद्याविभूषकांचे मायबाप

हा डिप्रेशनचा शिकार तो आत्महत्या करतो ज्याला समजावं सेलिब्रिटी

मग का असतात वृध्दाश्रमात ?

तो एकाकीपणात मरतो

. जळजळीत वास्तव सांगतो तुमचा विश्वास ह्यावर बसणार नाही गरीब, आडाणी , प्रामाणिक मजूरांचे मायबाप वृध्दाश्रमात दिसणार नाही

#### <u>Siyu</u>

ज्यांनी कमावलं नाव त्याला आनंद का मिळत नाही ? काय चाटायचं ह्या मोठेपणाला नातं आपुलकीचं जुळत नाही

त्रिकोण,चौकोन,षट्कोन ह्याजा सांगा विचारेल कोण ? ज्याचे जवळ नसेल आयुष्याचा दृष्टीकोन

विपरीत परिस्थीतीतही जपणूक केली पाहीजे तत्वाची

#### सुरज सुरपाम EL 3RD YR

मेल्यावर दोन अश्रू हीच आयुष्याची कमाई ज्याने हे कमावलं नसेल तो आयुष्य जगलाच नाही.

चुकू द्या चुकलं तर अंकगणित अन् बीजगणित माणसांची बेरीज करा गुण नाहीत पण गुणवत्ता अगणित

व्याकरणापेक्षाही अंत:करणाची भाषा असते महत्वाची

![](_page_38_Picture_14.jpeg)

#### प्रणय चचाणे (EL, 3RD YR)

ना तोल ढळतो ना संयम दुःखातही सावरण्याची आस कारण अजूनही ह्या माणसांचा आहे माणूसकीवर विश्वास

#### बालपणीची रात्र उन्हाळी...

सुंदर वारा वाहत होता, हवेत तेवढा गारवा नव्हता, उन्हाळ्याची ती रात्र होती, लख्ख चांदणे त्यात प्रकाशीत होती, बघता त्याच चांदण्याकडे, बालपन आठवि सारे.

> झोपता सुरू होई खेळ चांदणे मोजण्याचा, त्यात होई घोटाळा साऱ्या गणिताचा, कधी सप्तर्षी तर कधी ध्रुव तारा जसा दिसावा, त्यातून आनंद होई सारा मनाला.

असाच हा खेळ चाले त्यात च आईचे गोड रागावने, पुरे झाले चांदणे मोजणे, सगळ्यांनी गुपचूप आता झोपी जाणे.

> पौर्णिमेचा चंद्र हा गोल, बोलून जाई काही तरी बोल, कदाचित तो सांगत असावा, आयुष्यात प्रकाशित व्हा, असेच हे बोल ऐकता, झोप लागे न सांगता, आ्रूशीच ती रात्र उन्हाळी, त्यातच मजा निराळी.... अशीच ती रात्र उन्हाळी ....

![](_page_39_Picture_5.jpeg)

आज च्या चढा ओढीच्या जीवनात ती आठवण एक मायेची थाप असते कधी ही तुटणार नाही अशी शाळेची नाळ असते

आज ही त्या शतळेला पाहिल्यावर आठवर्णींचा पूर येतो, डोळ्यात आलेल पाणी माझ्या शाळेची कथा सांगून जातो,

शाळा म्हणजे आईचं धरलेलं बोट जगाचं एक एक टोक असतं शाळेच्या आठवर्णींमध्ये मध्ये आपलं सारं ब्रम्हांड वसतं.

किती ही मोठा झालो तरी मी माझ्या शाळेचे उपकार विसरणार नाही आज शाळेकडे जाणाऱ्या लहान पावलांन मध्ये मी माझे प्रतिबिंब पाही.

#### अनिकेत पाटील( EL 3RD YR)

#### साहिल डोंगरे (EL 3RD YR)

#### :- रोहन खरे (EL 3RD YR)

#### पाठलाग स्वप्नांचा...

"आजकाल ह्या स्वप्ननगरी मध्ये इमारती उंच होत चालल्या आहेत परंतु समाजाची विचार करण्याची क्षमता लहान होत चालली आहे."

धावत्या गाड्या, धावती लोक, धावते जीवन सर्वच जणु तुम्हाला मागे टाकत आहे अस जाणवत, शिक्षणाचा बाजार व विश्वासाचा खेळ मांडला आहे ह्या नाकारात्मक अवस्थेत जाणवते की हे आयुष्य संपले का ? शांत सागरा सारखा बसलेलो मी, डोळ्या समोर होत असलेला सूर्यास्त हळू हळू समुद्राच्या आड जात असलेला सूर्य जणु स्वतःचे तेज त्या निळ्यागार सागरात सामाविष्ट करत होता. त्या स्वप्ननगरी ची ती ऊर्जा देणारी हवा पाणवलेल्या डोळ्यातील अश्रूंना दिलासा देत होती, माघून जाणाऱ्या झगमगीत गाड्या आणी त्यांचा शांत तो जलद गतीचा आवाज आयुष्या चा खरा अर्थ सांगत होता. तो समुद्र आणी तो सूर्यास्त ती जागा अनुभवून एकच विचार येत होता -

> "दिवसा खळाळतो सर्वत्र तो रात्री स्वतःलाच पाहू लागतो पूर्वेकडून पश्चिमकडे तो, रोज नव्याने वाहू लागतो ! हिशेब जगाचे मिटवून सारे, होतो स्तब्ध विश्वात स्वतःच्या सोडून देतो कथा किनारी, अवखळ कबीरा बेधुंद जगाच्या" !

त्या सागराला आणी सूर्यास्ताला पाहून मनी रुजवलेलं एक एक स्वप्न अकाश भरारी घेत, आजू बाजूच्या उंच उंच इमारती स्वप्न बाळगलेल्या प्रत्येकाला आकाशात गरुडझेप घेण्याचा पाठबळ देतात, जलद गतीने धावणारी लोकल पारिवारा साठी पाहिलेल्या स्वप्नांची जाणीव करून देतात, येथील जीवनशैली जरी जलद असली तरी ती जिद्दी आहे आणि तीच जिद्द स्वप्नपूर्ती साठी पूरक ठरते नौराश्य आल्यावर ही माझी स्वप्ननगरी मला धीर देते जेव्हा सोबत कोणी नसतं तेव्हा ती मला आधार देते, माझी स्वप्न नगरी म्हणजे माझी मुंबई मला स्वप्न पाहायला

शिकवते आणि ते पूर्ण करण्या साठी लढायला शिकवते, म्हणूनच म्हणतो -

""पाहिलेलं प्रत्येक स्वप्न इथे. गरुड झेप घेऊन पंख पसरवण्याची प्रेरणा इथे, अथांग सागरात स्वतःचा प्रतिबिंब दिसण्याची क्षमता इथे, मावळता सूर्य पाहून, अस्तित्वाचा सूर्योदय ही इथेच.""

मी माझ्या ध्येया पासून किती ही दूर गेलो तरी ती मला माझ्या ध्येयाची जाणीव करून देते. तो मावळता सूर्य उद्या परत त्याचा उदय होणार, हा शांत समुद्र उद्या परत सर्वांची गाऱ्हाणी ऐकून घेणार, ही स्वप्ननगरी नव्याने करोडो लोकांना अधार देणार आणी मी..... आकाशा कडे पाहून एक स्मित हास्य देणार उरी बाळगलेले एक एक स्वप्न पूर्ण करणार आणि कोणी सोबत नसले तरी एकच गोष्ट सांगणार -

> ""ते लक्ष सितारे सोबती, उंच त्या शिखारावरती, गाठायचे ते शिखर, श्वास हा रोखुनी..... संकटे लाख ती, वाट रोखन्यासाठी, न थामबायचे आता, स्वप्न गाठन्यासाठी....""

जेव्हा अस्तित्वाची जाणीव स्वतः तुम्हाला होते तेव्हा फरक नाही पडत तुम्हाला ह्या जगाचा, अस्तित्व आणि स्वप्न साकारण्या साठी तेव्हा सुरु होतो पाठलाग स्ववनांचा.....

#### प्रभूतिः

'प्रभूति:' means the ORIGIN. Sanskrit is the mother of all languages. Nearly all the Indian languages are emerged from Sanskrit. Meanwhile,many European languages has Sanskrit influence and abundance of Sanskrit words.

It is the oldest of all the languages of the world. It is also known as Devavani, Devabhasha and Divivaak. In ancient times, the language was too common and eveyone spoke Sanskrit. Most of literatures before the year AD is in Sanskrit language.

Sanskrit is one of the treasure for India. It is language that is refined, pure, free from grammatical errors and so on. It has more words than any other language. The importance of this language is well known even foreign states. Scientists say that Sanskrit is the best language for computers as it has very rare errors.

![](_page_41_Picture_4.jpeg)

Sanskrit Editor

![](_page_41_Picture_6.jpeg)

Sanskrit is the lifeblood of India. It is what makes the India into single thread but the situation of this language is very bad. Sanskrit is known to be dead language in India. People are not passionate about Sanskrit language. We must read and practice Sanskrit.

#### मुर्वम् उद्दिश्य उपदेशः

कश्चन पर्वतः आसीत् । तत्र बहवः वानराः वसन्ति स्म । कदाचित् हेमन्तसमयः सम्प्राप्तः । सर्वत्र वातावरणे अत्यन्तं शैत्यम् आसीत् । हिमपातः अपि भवति स्म । एतादृशं दुस्सहं शैत्यं सोढुम् अशक्ताः वानराः कम्पन्ते स्म ।

एकदा कश्चित् वानरः कुतश्चित् कानिचित् गुञ्जफलानि आनीतवान् तानि गुञ्जाफलानि अग्निकणसदृशानि आसन् । अतः वानराः चिन्तितवन्तः - 'एतान् अग्निकणान् मध्ये स्थापयित्वा, परितः शुष्काणि पर्णानि स्थापयित्वा फूत्कारं कुर्मः चेत् अग्निः उत्पद्यते । तेन वयं शैत्यपीडां दूरीकर्तुं शक्नुमः ' इति । एवं चिन्तयित्वा ते गुञ्जफलानि मध्ये स्थापयित्वा परितः पर्णानि स्थापितवन्तः । फूत्कारं कर्तुम् आरब्धवन्तः । परन्तु महता प्रयत्नेन अपि अग्निः न

उत्पन्नः।

सूचीमुखः नाम पक्षी एतत् सर्वं पश्यन् आसीत् । वानराणां वृथाप्रयासं दृष्ट्वा सः उक्तवान्- "भोः मूर्खाः । एते अग्निकणाः न । अपि तु एतानि गुञ्जफलानि । भवन्तः किमर्थं व्यर्थश्रमम् अनुभवन्ति ? कुत्रापि गुहायां निर्वातत्रदेशः अस्ति वा इति अन्विष्यन्तु । तत्र गत्वा तिष्ठन्तु " इति ।

तेषु एकः वृद्धः वानरः आसीत् । सः सूचीमुखम् उक्तवान् - "अरे मूर्ख ! किं करणीयं किं न करणीयम् इति वयं सम्यक् जानीमः भवतः उपदेशः न अपेक्षितः । मौनेन इतः गच्छतु" इति ।

परन्तु सूचीमुखः तस्य वाक्यम् अनादृत्य पुनः किमर्थं वृथा श्रमम् अनुभवन्ति भवन्तः ?" इति वक्तुम् आरब्धवान् । सूचीमुखस्य उपदेशेन कुपितः कश्चन वानरः तं पक्षयोः गृहीत्वा -शिलातले घट्टितवान् । तेन घट्टनेन सूचीमुखः मृतः ।

> कथायाः नैतिकता :-मूर्खम् उद्दिश्य उपदेशः अस्माकं विनाशाय एव भवति । SOURCE:PANCHATANTRA

KETAN NARWADE EL 3rd Yr

#### नवीकरणीय उर्जा एवं स्थायि भविष्य।

नवीकरणीय ऊर्जा मानवीयकालपरिमाणे प्राकृतिकरूपेण पुनः पूरितानां संसाधनानाम् आगमनं भवति । एतादृशेषु संसाधनेषु जैवद्रव्यं, भूतापीतापः, सूर्यप्रकाशः, जलं, वायुः च सन्ति । एतेषां सर्वेषां स्रोतांशानां बलाबलं च भवति ।

यदि विश्वं ऊर्जा-उत्पादनस्य स्थायि-दृष्टिकोणं प्रति गन्तुं इच्छति तर्हि अधुना नवीकरणीय-ऊर्जा-प्रौद्योगिक्याः विकासः बहुधा महत्त्वपूर्णः इति दृश्यते |. नवीकरणीय ऊर्जायाः विषये वर्धमानः रुचिः, अंशतः, पारम्परिकजीवाश्म-परमाणु-इन्धनानां अस्माकं निरन्तर-उपयोगस्य प्रदूषणस्य, संसाधनक्षयस्य, सम्भाव्यजलवायुपरिवर्तनस्य च प्रभावस्य चिन्ता वर्धमानेन प्रेरिता अस्ति अद्यतनप्रौद्योगिकीविकासैः अपि अनेकेषां नवीकरणीय ऊर्जानां व्यय-प्रभावशीलतायां सुधारः अभवत्, येन तेषां आर्थिकसंभावनाः अधिकाधिकं आकर्षकाः दृश्यन्ते अस्मिन् जलविद्युत्, जैवद्रव्यरूपान्तरणं, भूतापी, सौरतापप्रौद्योगिक्याः, पवनऊर्जारूपान्तरणं, प्रकाशविद्युत्प्रयोगस्य च वर्धमानस्य उपयोगस्य च वर्णनं कृतम् अस्ति वैश्विकतापः प्रचलति, जलवायुः, तथैव अनेकदेशानां भूभागं च परिवर्तयितुं गच्छति इति स्पष्टम्, यावत् कठोरपरिहाराः न क्रियन्ते |

उपसंहारार्थं नवीकरणीय ऊर्जाप्रौद्योगिकीः प्रतिदिनं क्रमेण लोकप्रियाः भवन्ति । परन्तु वैश्विक ऊर्जा-उत्पादने तस्य भागः अद्यापि अत्यल्पः अस्ति । अतः वैश्विक ऊर्जामिश्रणे नवीकरणीय ऊर्जाप्रौद्योगिकीनां भागं वर्धयितुं विश्वव्यापीप्रयत्नानाम् समर्थनं अतीव महत्त्वपूर्णम् अस्ति । नवीकरणीय ऊर्जा ऊर्जा उत्पादनस्य विश्वसनीयः प्रमुखः स्रोतः अस्ति, यः विश्वस्य कुल ऊर्जामागधां पूरयितुं समर्थः अस्ति तथा च असह्यसमस्यानां अभिनवसमाधानं प्रदातुं उत्तमः अवसरः अस्ति।

NIRAJ DHAWARE

या देवी सर्वभूतेषु शक्तिरूपेण संस्थिता । नमस्तस्यै नमस्तस्यै नमस्तस्यै नमो नमः ।

To that goddess who resides in all living being in the form of 'shakti'. Salutations to her.

जो सभी जीवों मे शक्ति के रूप मे निवास करती है उस देवी को प्रणाम.

कस्माच्च ते न नमेरन्महात्मन् गरीयसे ब्रह्मणोऽप्यादिकर्त्रे । अनन्त देवेश जगन्निवास त्वमक्षरं सदसत्तत्परं यत् ।

Hey enlighted soul! mahatma! Why don't those siddhagans (the siddhas), the of guru the gurus and orignator of Brahma bow down to you?

Because O Eternal! hey devesh! Jagannivas! You are Literal, You are the truth, you are the false. You are the one who is beyond the true & glase.

हे महात्मन् । गुरुओं के भी गुरु और ब्रम्हाके भी आदिकर्ता आपके लिये वे सिद्धगण नमस्कार क्यो नही करे? क्योकी हे देवेश! हे जगन्निवास! आप अक्षरस्वरूप है, आपही सत्य है और आपही असत्य थीं। आज इस इस सत्य और असत्य जो भी और है, वह भी आप ही है।

![](_page_44_Picture_7.jpeg)

KHMEMENDRA UDEPURE EL4th Yr

![](_page_44_Picture_9.jpeg)

अद्य अहं तान् इच्छामि, श्वः तेषां मम आवश्यकता भविष्यन्ति। अद्य अहं श्रान्तः अस्मि, श्वः अहं नूतना आशासह जागृयामि।।

न तावत् विलम्बः पुनः उत्थाय । तव आत्मा धारयतु भवतः हस्तौ एव युवम् शिरः उपरि करोतु ।।

अद्य अहं असफल: श्वः अहं उत्तीर्णः अस्मि । अद्य अहं दुःखी, श्वः अहं हर्षयिष्यामि।।

#### अह्य क्षार्ट्स मुहार्ट्स

#### स्वतन्त्रता त्वां प्रतीक्षते आकाशस्य समीरे। त्वं पृच्छसि," किं यदि अहं पतामि ?", अहो किन्तु मम प्रिये," किं यदि अहं उच्चैः उड्डीयत?" ||

#### RAKSHITA TABHANE

**SKETCHES SECTION** 

"Creativity is seeing what others see and thinking what no one else ever thought." - Albert Einstein.

![](_page_46_Picture_2.jpeg)

Art is generally understood as any activity or product done by people with a communicative or aesthetic purpose something that expresses an idea, an emotion or, more generally, a world view. It is a component of culture, reflecting economic and social substrates in its design.

Artists of all disciplines use sketching as a means to record ideas, memories, and observations.

Experiencing art from the act of painting and sculpting to a visit to an art museum offers a variety of benefits to well-being including decreased stress and stronger critical thinking skills. Drawing and sketching in particular have been connected with improved creativity, memory, and stress relief, and are also used in art therapy.

Sketching has several benefits such as it enhances creativity, Strengthens Focus and Strategic Thinking, Improves Holistic Health and helps in coordination

#### Adarsh Madankar

AR

Adarsh Madankar

El 4th Year

Shriya Karanjekar

El 2nd Year

#### El 4th Year

#### Shriya Karanjekar

El 2nd Year

![](_page_47_Picture_4.jpeg)

![](_page_48_Picture_0.jpeg)

# A Constant of the second secon

#### Tejas Shrikhande

**ETC 1st Year** 

#### Khemendra udeypure

-

"El 4th Year

![](_page_50_Picture_0.jpeg)

#### "ARTISTREAK"

![](_page_50_Picture_2.jpeg)

den t step dreanging

![](_page_50_Picture_4.jpeg)

Sanidhya Samundre Creativity Head

![](_page_50_Picture_6.jpeg)

"JMAGINATION IS THE BEGINNING OF CREATION. 'YOU IMAGINE WHAT YOU DESIRE, YOU WILL WHAT YOU IMAGINE, AND AT LAST, YOU CREATE WHAT YOU WILL."

"WHEN LEARNING IS PURPOSEFUL, CREATIVITY BLOSSOMS. WHEN CREATIVITY BLOSSOMS, THINKING EMANATES. WHEN THINKING EMANATES, KNOWLEDGE IS FULLY LIT. WHEN KNOWLEDGE IS LIT, ECONOMY FLOURISHES." **PHOTOGRAPHY SECTION** 

## THE PICTURE

#### Behind every picture... ... there is a story ... to tell.

The essence of photography is to treasure moments and share them with the world. Quite simple, but the action itself is capable of changing people's perceptions.

#### Sarthak Bargat Photography Head

#### Atharva Raut Photography Co-Head

SR D

#### In this section of Agnistok's "The Picture Patch", there are various photos taken by various people which make us, LIVE FOR THE MOMENT YOU CAN'T PUT INTO WORDS.

![](_page_51_Picture_7.jpeg)

#### Sarthak Bargat III Year, Electrical Dept.

![](_page_52_Picture_1.jpeg)

![](_page_52_Picture_2.jpeg)

Atharva Raut

#### Karan Bipate IV Year, Electrical Dept.

#### **II Year, Electrical Dept.**

![](_page_52_Picture_6.jpeg)

![](_page_52_Picture_7.jpeg)

![](_page_53_Picture_0.jpeg)

#### Yash Ingole **III Year, Electrical Dept.**

#### Anushka Shirke

![](_page_53_Picture_4.jpeg)

#### II Year, IOT Dept.

![](_page_53_Picture_6.jpeg)

#### Souren Shende **III Year, Electrical Dept.**

![](_page_53_Picture_8.jpeg)

![](_page_54_Picture_0.jpeg)

#### NANDINI NANDILVAR IV YEAR, ELECTRICAL DEPT.

![](_page_54_Picture_2.jpeg)

#### **VEDIKA BANTE** III YEAR, ELECTRICAL DEPT.

![](_page_54_Picture_4.jpeg)

#### **SHRUTI DOIFODE** II YEAR, ELECTRICAL DEPT.

![](_page_54_Picture_6.jpeg)

#### NAINIKA SATHAWANE II YEAR, ETC DEPT.

![](_page_54_Picture_8.jpeg)

#### Gompiling section

![](_page_55_Picture_1.jpeg)

![](_page_55_Picture_2.jpeg)

#### **Sponsopship section**

![](_page_55_Picture_4.jpeg)

#### \* SPONSORSHIP HEAD \*

![](_page_55_Picture_6.jpeg)

![](_page_55_Picture_7.jpeg)

![](_page_55_Picture_8.jpeg)

#### DESIGNING SECTION THE VISIONARIES

SHASHWAT GOVARDHAN MAGAZINE DESIGNER **VEDIKA BANTE** MAGAZINE DESIGNER

ADITYA GACHKAL MAGAZINE CO-DESIGNER

#### "There are three responses to a piece of design - yes, no, and WOW! Wow is the one to aim for."

To design is much more than simply to assemble, to order, or even to edit: it is to add value and meaning, to illuminate, to simplify, to clarify, to modify, to dignify, to dramatize, to persuade, and perhaps even to amuse. To design is to transform prose into poetry We can learn to measure the success of our ideas not by our bank accounts by their impact on the world

#creativedesigns

#### trainic and placements

Accenture : Aman Swami Nath Yadav, Apeksha Gulab Nimje, Rachana Sharad Ramteke, Sayali Dewaji Chawane, Aditi Ashish Jaitly, Vidhi Sandip Jawale, Janhvi Shishir Katey, Riya Ravi Ankamwar.

<u>LTI :</u>

**Reliance** 

**Retail :** 

**TCS :** 

Manthan

Aman Swami Nath Yadav, Shruti Narendra Bhoyar, Rupali Ashok Nagpure, Kshitija Ashok Indurkar, Kshitij Samir Kumar Chaube, Yuti Ajay Rajurkar, Pratiksha Mukundarao Raut, Shreya Sagar Uplenchwar, Saurabh Arun Deshbhratar, Sakshi Dnyaneshwar Maind, Vrushank Sanjay Choudhary, Anand Chandrakishor Walde, Pranaykumar Bhimraj Dahake.

Siemens : Kshitija Ashok Indurkar, Mayuresh Prakash Nagarkar, Nikita Dilip Sachdev.

Bhende,

Dnyaneshwar Maind,

Industries Limited

Yuti Ajay Rajurkar, Abhishek Bhaskar Jiwtode.

Pramod

Aayushi Kiran Chaudhary.

<u>Climate</u> Madhushri Kishor Chopkar, Sushmita Sushant Gadewar. <u>Connect :</u>

Tata Elxsi : Sejal Raju Bhendarkar, Abhishek Bhaskar Jiwtode.

<u>Collebera</u>: Kavita Sajjan Sharma, Hiranmayi Satyanarayana Toutam, Sanjukta Sanjay Kharate, Bhargavi Damodhar Wasu, Prathamesh Prakash Chitade.

**Capgemini :** Aman Swami Nath Yadav, Sayali Dewaji Chawane, Aditi Ashish Jaitly, Shrushti Prakash Pande, Shruti Narendra Bhoyar, Ritesh Gajanan Kamle, Prajakta Yogendra Chopkar, Siddhesh Nainesh Kathale, Sarthak Gajanan Wankede, Tejas Ganesh Gothane, Rupali Ashok Nagpure, Ashish

![](_page_58_Picture_0.jpeg)

#### TRAINING AND PLACEMENTS

**GenC :** Ankit Sudhir Gokhe, Lokeshwari Pramodrao Harankhede, Devendra Pandharinath Aglawe, Anuj Devidas Madankar, Ayush Shivram Ninawe, Kamlesh Arun Mujbaile, Saloni Arvind Sangode, Tushar Anil Wararkar, Shraddha Sahebrao Gadge ,Kshitija Ashok Indurkar, Darshana Suresh Lokhande, Mayur Vilas Jungari, Manthan Pramod Bhende, Anishka Ashok Meghe, Simran Kashyap Gajbhiye, Shrikant Shridhar Iyer, Tanvi Rajendra Gaikwad, Akhilesh Abhay Mangrulkar, Adwait Mahendra Patki, Sanket Dnyaneshwar Hajare.

JSW: Sayali Dewaji Chawane, Shrushti Prakash Pande, Prajakta Yogendra Chopkar, Lokeshwari Pramodrao Harankhede, Kshitija Ashok Indurkar, Manthan Pramod Bhende, Yuti Ajay Rajurkar, Kavita Sajjan Sharma, Hiranmayi Satyanarayana Toutam, Vaishnavi Gopal Shelokar, Yash Jaykrishna Mohod, Ishwar Pramod Balbudhe.

**Bristlecone :** Aniket Madhukar Aglawe

L&T (Core): Devendra Pandharinath Aglawe

Konverge : Darshana Thameshwar Nagpure, Kshitij Samir Kumar chaube.

MyCaptain : Roshan Vilas Ghorad, Madhushri Kishor Chopkar, Shriniwas Vijay Channe, Nikita Dilip Sachdev, Shreyash Shalikram Narole, Atharva Abhijeet Hundikar, Nikki Sunil Singh, Vishwajeet Kishor Lakshne.

ADANI : Sayali Dewaji Chawane, Shreya Sagar Uplenchwar, Ameya Moreshwar Maidamwar, Kanishka Nishant Bele, Mayuresh Prakash Nagarkar,

Raghavpuri R Venkat Laxman Murty Saideepak, Ashutosh Prakash Choudhari, Shreyas Sachidananda Tayade, Mukul Girish Meshram, Parimal Nutan Dandare, Aniket Arvind Dangore.

Kayalar

<u>CAPGEMINI (5.75):</u> Chetan Devendra Banait

![](_page_58_Picture_11.jpeg)

## Achievements

![](_page_59_Picture_1.jpeg)

#### Dr. P. M. Meshram

research paper title "A Level enhanced voltage balancing Method for Modular Multilevel Converter without sensors" is accepted in SCI journal Wiley 's International journal of circuit theory applications'

![](_page_59_Picture_4.jpeg)

#### **Prof P. S. Patil** Received a Seminar grant from SERB of Rs 1 Lakh towards conducting a 2 day seminar on "AC and DC microgrids, Configurations Control and Applications

#### Prof P. S. Shete

received best paper for research paper title "Comprehensive Energy Conservation for Steel Processing and Manufacturing industry and also recieved best paper for research paper title "IoT Based Real Time Monitoring of Three-Phase Induction Motor

#### Prof N. S. Padole

presented a research paper titled "Impact Analysis of PV Penetration on Voltage Dynamics of Radial Distribution System using Backward Forward Sweep Load Flow Algorithm

![](_page_59_Picture_10.jpeg)

#### Dr. Sarika D. Patil and prof Akshay D. Kadu

published a book chapter titled "Solve selective harmonic elimination problem with a new metaheuristic optimisation algorithm

![](_page_59_Picture_14.jpeg)

#### Prof Swati K Mohod

published a book chapter titled " Spontaneous Detection of Potholes and Humps

#### Students Achievements

Aditya Bhende

Mayuri Giri Khobragade Shruti Doifode

Saksham Tambe

Vaibhav sengar

**1**st Rank in Circuitron in Electrica

Participated in Justa Quizza

1st Rank Pen It Down event

SECURED 2ND RANK and achieved the Top Contributor award around the globe at google crowdsource.
 Got Certificate from isro in Overview of Global Navigation Satellite System
 "CYBER HYGIENE PRACTITIONER" under the Ministry of Electronics & Information Technology, Government of India (ISEA)
 Won 3rd Prize at Gdg Cloud Community Day in ML Competition.

Got 1st position in Mesmerize Bhopal zonal (line follower competition) organized by iit bombay(techfest).

![](_page_59_Picture_27.jpeg)

![](_page_60_Picture_0.jpeg)

#### 2ND YEAR (B)

![](_page_60_Picture_2.jpeg)

![](_page_61_Picture_0.jpeg)

#### **3RD YEAR (B)**

ADMINISTRATIVE COMPLEX

#### **3RD YEAR (C)**

![](_page_61_Picture_3.jpeg)

#### 4TH YEAR (A)

INISTRATIVE COMPLEX

ADM

![](_page_62_Picture_1.jpeg)

#### DEPARTMENT OF ELECTRICAL ENGINEERING

2022-2023

![](_page_63_Picture_6.jpeg)