

E-Magazine



(2020-2021)

Presented by

Mandatory Additional Requirement (MAR) Committee, ECE

Mr. Sourav Das
Convenor (MAR)

Dr. Krishna Hazra
Chairman (MAR)



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A NEW STEP...

We are glad to launch the first ever online version of the college magazine for MAR for the year 2020-2021. In this era where literary works are produced, processed, published and documented through the digital and cyber media, the college e-magazine is an endeavour to keep pace with the changing nature of readership and accessibility. We hope that the e-magazine will reach out to a larger circle of readers both within and beyond the college.

The journey of the magazine from its concept to materialization, from the realm of imagination to its actualization in the cyber medium, would not have been possible without the collective Initiative taken by the faculty and students in terms of creativity, techno-savvy skills, diligence and patience.

We would like to thank the Principal of the college, Prof. Dr. S. Basack (Principal, ECE) for believing in this innovative venture and for her solid support and active engagement with the project.

As every literary journey begins with a tiny spark of idea, we also thank Dr. Krishna Hazra HOD of Mechanical Engineering who first proposed the concept of a widely accessible e-magazine. We sincerely appreciate the dedication of our students and MAR committee team members (Convenor Mr. Sourav Das, Mrs. Alpana Saha Chowdhury, Mrs. Dipasri Saha, Mr. Souradeep Sarkar, Mr Pallab Sarkar) who ensured the smooth completion of this voyage by putting their heart and soul in the visual designing of this magazine also thanks to Prof. Dr. S. Basack (Principal, ECE), Prof. Dr. B.G Gupta and Dr. K. Hazra chaired the position of judge for the competition.

Magazine Committee

1. Dr. Krishna Hazra (Chairman of MAR)
2. Sourav Das (Convenor of MAR)
3. Mrs. Alpana Saha Chowdhury
4. Mrs. Dipasri Saha
5. Mr. Souradeep Sarkar
6. Mr Pallab Sarkar



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Message from the Director (Academic and HR), ECE



Education is a tool to enlighten students, empower individuals and thereby evolve our society in a positive, progressive direction. As socially aware and alert citizens, we all must be committed to educate in order to encourage, to inspire, guide; and above all, to teach and learn to respect humanity regardless of religion, caste, gender and class. Universities and colleges are places of understanding and analysing the world around us.

Only then can we hope to change this world! The college magazine is a space for students to express their ideas, opinions, imagination, concerns, questions, creativity, doubts, thoughts, feelings, views, visions, dreams and goals. Congratulations to the Principal and the Editorial team for providing this space.

I extend my full support to all endeavours aimed for the advancement of the student community.

All the best!

DR. BAZLUL HAQUE
Director (A and HR), E.C.E



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Message from the Director (Operation), ECE



Nurturing creativity and inspiring innovation are two of the key elements of a successful education, and a college magazine is the perfect amalgamation of both. It harnesses the creative energies of the academic community, and distils the essence of their inspired imagination in the most brilliant way possible. Hence, I am delighted to know that annual college e-magazine for 2020-21 is ready for publication.

I take this opportunity to congratulate the editorial board for bringing out this magazine as per schedule, which in itself is an achievement considering the effort and time required. May all our students soar high in uncharted skies and bring glory to the world and their profession with the wings of education!

SAJAL GHOSH
Director (Operation), E.C.E



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Message from the Principal, ECE



The essence of knowledge lies in a spirit of creative thinking, expression and experimentation. And in this regard the college magazine by MAR has played a vital role as a platform for the students to think, reflect, create and innovate in a multitude of languages and literary genres. The magazine is indeed a precious document that preserves the words and vision of our talented students as budding poets, writers and thinkers.

It is a significant milestone in their creative journeys and inspires them to aspire higher. In today's world where we are constantly surrounded by events of social unrest and multiple forms of oppression, it is of the utmost importance that students explore issues that extend beyond their curriculum and classroom. Literature is one of the most powerful media through which they can engage with the world meaningfully and creatively.

It is a holistic art generated by introspection and retrospection, by self-questioning and a desire to seek answers, by imagination and a deeper understanding of realities.

I congratulate the entire MAR Committee of the magazine and appreciate their dedication.

Prof. Dr. S. Basack
Principal, ECE



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- ONLINE DEBATE COMPETITION -

TOPIC

**“ONLINE TEACHING
VERSUS
CONVENTIONAL CLASSROOM TEACHING”**



“Online Teaching versus Conventional Classroom Teaching”

Date: 20th July, 2020.

Mode: Online.

For Lin: Click here

<https://drive.google.com/file/d/1EZbHSIDIDsdkEw0ar4uESD54ze6mTkiH/view?ts=5f226dbf>

https://drive.google.com/file/d/1vpdgzApDOfu0aw8_O1Q-Ae4sh31YGoXo/view?ts=5f226dae

https://drive.google.com/file/d/1GF25XWTmT1SG7EZSXOKGHQbVaOFFh_N/view?ts=5f226d85

Brief Description of the event:

Online debate competition would be held on 20th July 2020 as a part of the MAR activities of the students. The topic of the debate was decided to be “Online Teaching versus Conventional Classroom Teaching”. The interested students were to submit their names by 7th July 2020 and 96 students enrolled for the debate. All the 96 students were divided in four groups of 24 in each group and three finalists from each group, thus a total of twelve finalists were to be selected.

The Preliminary competition of the students was held online on 20th July 2020 from 12:00 PM onwards. Each participant was allotted 10 minutes to speak. The Judges for this preliminary round were Prof. Dr. K Hazra, Prof. Sourav Das, Prof. Sourdeep Das, Prof. Pallab Sarkar, Prof. Tathagata Roy Chowdhury, Prof. Dipasri Saha and Mrs. Alpana Saha Chowdhury. Most of the students spoke so well that it really made the competition very interesting and the judges faced the real challenge to choose the twelve finalists. However, considering all the aspects, the finalists were chosen and the names are:

1. Ms. Hitaisona Bhattacharjee(CSE)
2. Mr. Ranadeep Dutta (EE)
3. Mr. Durlav Saha (CE)
4. Mr. Rabijit Dey (EE)
5. Mr. Jyotirmoy Bhattacharyya (CSE)
6. Mr. Bikas Kumar (CSE)
7. Ms. Nikita Mukherjee (CSE)
8. Ms. Ayndrila Paul (CSE)



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9. Mr. Tanmay Mishra (EE)
10. Mr. Sayantan Bose (EE)
11. Mr. Gourab Ganguly (ME)
12. Mr. Saikat Mukherjee (CE)

On the next day, that is, on 21st July 2020 the Final Round of this competition started from 12:00 PM and continued up to about 03:00 PM. All the twelve finalists were present online.

The Judges for the Final were Prof. Dr. S Basack, Principal ECE, Mr. P. K. Nag, Administrative Officer,

Winners:

1. Rabijit Dey, 3rd Year Electrical Engineering
2. Jyotirmoy Bhattacharya, 3rd Year Computer Science Engineering

Runner-ups:

1. Ayndrila Paul, 2nd Year Computer Science Engineering
2. Gourab Ganguly, 4th Year Mechanical Engineering



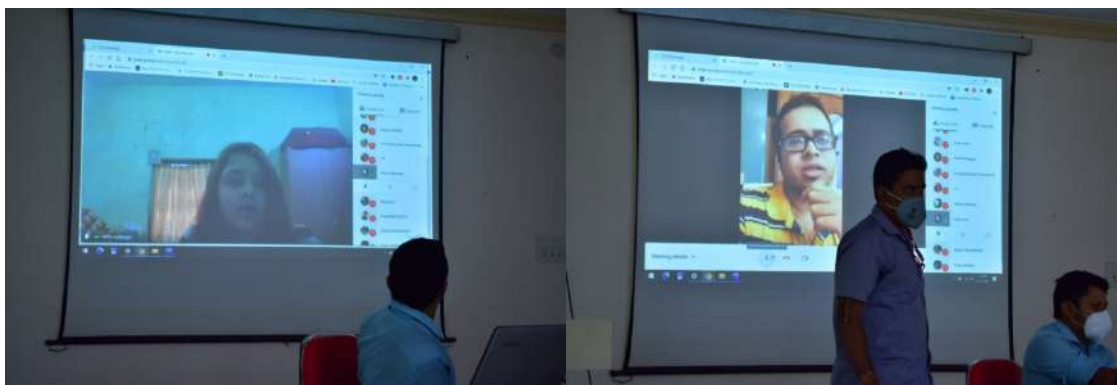
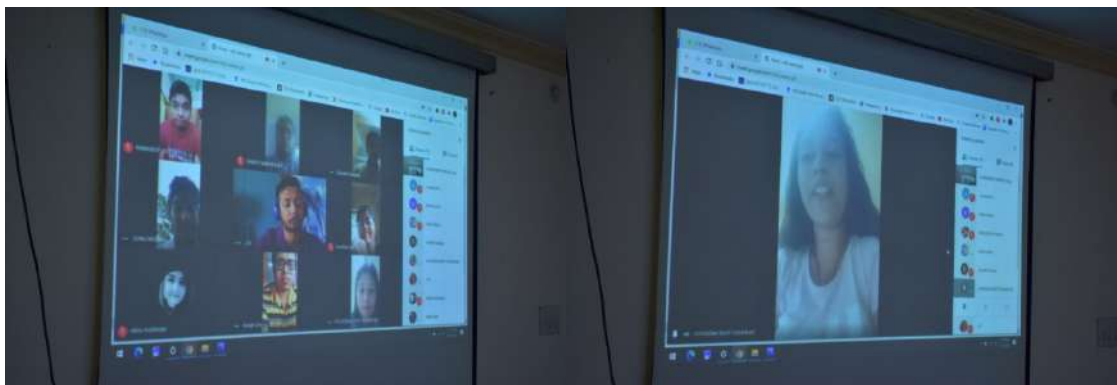
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Some Photographs of the event:



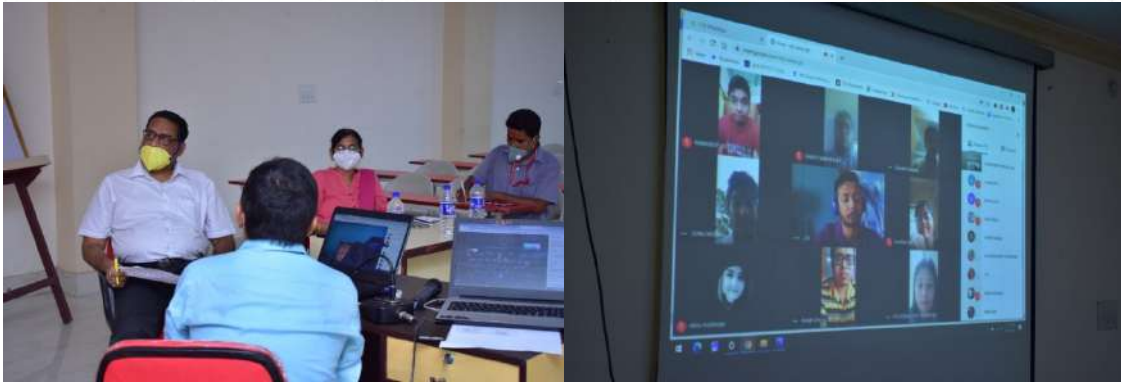


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Certificates of Online Debate Competition:





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Online Writing Competition

Topic

“Recent Developments in Science and Technology”



“Recent Development in Science and Technology”

Date: 22nd July, 2020.

Mode: Online.

Brief Description of the Event:

- The Students submitted their Write-up note more than FOUR A4 size pages with format: 12 point times new roman single spacing with 1” overall margins. Figures, photograph, tables also included.
- All write-up documents submitted to elite.mar@gmail.com. The mail id provided specially by MAR.
- Mr. Sourav Das, Convenor of MAR committee told about the necessity of writing competition for the students and its impact included in MAR.
- Sourav Das. Convenor, coordinate the Writing competition. .
- Dr. Krishna Hazra HOD of ME synchronized the competition.
- Prof. Dr. S. Basack (Principal, ECE), Prof. Dr. B.G Gupta and Dr. K. Hazra chaired the position of judge for the competition.
- The most suitable candidate will be short listed with the help judge for the competition.
- The program was glorified with joyful participation of total 27 numbers of students. Splendid performance demonstrated by the students, who are waiting for this program.
- The topic of the Writing competition was decided by Dr. Krishna Hazra (Chairman of MAR) and Dr. Sudip Basack (Principal, ECE). A specific email id was given for the collection of all write-up documents by the students.

Winners:

Puja Chakraborty, 3rd Year Civil Engineering

Runner-ups:

Prasun Datta, 3rd Year, Civil Engineering



PAPER SENSOR

By Puja Chakraborty

(Civil Engineering , 2nd yr , Roll No' – 49)

➤ Introduction :

Scientists at Indian Institute of Technology, Guwahati, have developed a simple paper kit that can test freshness of milk and tell how well it has been pasteurized. Aided with a smart phone app, the kit can help ensure that milk is consumed before it turns too sour.

Milk being widely consumed food, its safety is of prime concern to consumers. More so because it is highly perishable and prone to action of enzymes and microorganisms inherently present in it. Although pasteurization, freezing and preservation using additives are widely used to prevent spoilage, perishability of milk is still a concern.

There is no easy way to know if milk is fresh or stale or how effective is pasteurization. Tests used in dairies and dairy industries are time consuming and need sophisticated equipment like spectrophotometers. The new detection kit developed at IIT could make testing easy and fast.

A milk enzyme, Alkaline Phosphatase or ALP, is considered an indicator of milk quality because its presence even after pasteurization indicates presence of microbes that may not have been rendered inactive with pasteurization.

Researchers used ordinary filter paper to prepare the detector. The filter paper was cut into small discs using office punch and impregnated with chemical probes that preferentially react with ALP. The 'probes' used are antibodies that specifically bind to ALP. When ALP comes into contact with the probe, it turns white paper disc into a coloured one.

➤ Context:

Scientists at Indian Institute of Technology, Guwahati, have developed a simple paper kit that can test freshness of milk and tell how well it has been pasteurized. Aided with a smart phone app, the kit can help ensure that milk is consumed before it turns too sour.

➤ Background:

Milk being widely consumed food, its safety is of prime concern to consumers. More so because it is highly perishable and prone to action of enzymes and microorganisms inherently present in it. Although pasteurization, freezing and preservation using additives are widely used to prevent spoilage, perishability of milk is still a concern.

➤ Materials and equipment:

The design of a detection platform comprises hydrophilic circular regions confined by hydrophobic boundaries. Standard filter paper (Whatman qualitative #1) was used as a substrate for making the devices. Solid paraffin wax was sourced from a local commercial shop in Chennai, India. Wax was selected for making hydrophobic barriers on a paper substrate due to its suitable characteristics. It readily melts on exposure to heat and permeates through the porous matrix of the substrate. Upon cooling, it solidifies and occupies the pores thus enabling the formation of hydrophobic barriers. Milk was sourced from a local commercial dairy store. Potassium iodide (KI) and iodine were used as chemical reagents for the colorimetric detection of starch in milk. KI contains iodide ions that combine with iodine molecules to form tri-iodide ions that are soluble and are responsible for interaction with starch resulting in colorimetric signal generation. All chemicals used in the experiments were of analytical grade and were purchased from the Southern India Scientific Corporation, Chennai, India. Double distilled water was used for all dilutions. Commercially available ink purchased from a local stationery shop (Chennai, India) was used for the purpose of confirmation of the hydrophilic detection zone. A smartphone from a local stationery shop (Chennai, India) was used for the purpose of



confirmation of the hydrophilic detection zone. Smartphone (Samsung Galaxy s7e, model number SM-G935FD, Samsung India) was used for image acquisition during the experiments. from local stationery shop (Chennai, India) was used for the purpose of confirmation of the hydrophilic detection zone. Smartphone (Samsung Galaxy s7e, model number SM-G935FD, Samsung India) was used for image acquisition during the experiments. from local stationery shop (Chennai, India) was used for the purpose of confirmation of the hydrophilic detection zone. Smartphone (Samsung Galaxy s7e, model number SM-G935FD, Samsung India) was used for image acquisition during the experiments.

➤ Fabrication :

The fabrication of a cellulosic paper-based analytical lab-on-a-chip platform was performed using the principles of wax permeation as reported in the literature [18,19]. Figure 1 shows the steps involved in fabrication. Briefly, the paper substrate was marked with the design of the detection region, here circular in shape. The design was printed or drawn manually using a marker. Wax was then gently rubbed outside the boundaries of the detection region. The substrate with wax coating was placed on a hot plate and temperature was set to 120°C for 5 s. Heat treatment caused wax to melt and permeate across the thickness of paper. The substrate was allowed to cool down for 10 min and stored in a clean and dry environment for further experiments.

➤ Experimental:

Ink solution was used to validate the formation of hydrophilic detection regions surrounded by hydrophobic boundaries. A total of 200 µl of ink was pipetted and gently placed in the centre of the detection region. It was allowed to diffuse and observations were visually and photographically recorded. For milk contamination testing experiments, 1% iodine solution was prepared using KI and iodine. A total of 200 µl of the solution of potassium tri-iodide was coated in the detection region and allowed to dry for 5 min. The devices were stored or used for subsequent testing. Milk procured from the store was used as a blank sample. Another contaminated milk sample was synthetically prepared for testing purposes by dissolving a pre-measured amount of starch in milk. A total of 200 µl of sample was pipetted and gently introduced at the centre of the detection region and colour changes were recorded. Miniscule amounts of reagents and samples were required for performing lab-on-a-chip experiments compared to a macroscale. For further quantitative analysis, images were captured using a smartphone and processed as described in the subsequent sub-section. In order to generate a calibration graph for various concentrations of starch in milk, a series of experiments were performed for starch concentration ranging between 0 and 10% w v⁻¹.

➤ Detect The Freshness Of Milk By Paper Sensor Method:

With the development in technology there has been lot of changes in our lives and now the scientists at Indian institute of Guwahati has developed a paper sensor which can detect the freshness of the milk with a simple paper kit. We can know how well the milk has been pasteurized as the milk is most consumed liquid by children and seniors. Though they are using the preservatives and freezing the milk the quality of the milk is concerned. The testing in the dairy factories takes a lot of time and need complicated equipment's like spectrophotometers. And the process is so long, this simple paper sensor can do the job easily and quickly. We also get a mobile application where we can check and consume the milk before it turns too acidic.

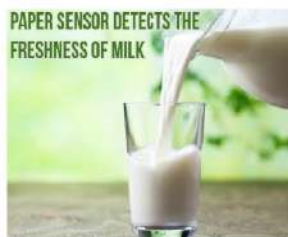


➤ Detect The Freshness Of Milk By Paper Sensor:

These days the sensors are used every where to make the life simple and easy. The paper sensor is a reflective sensor suitable for relatively short distance detection. Using this sensor a new invention is made in which a small kit is used to know the freshness of the milk. Alkaline phosphatase (ALP) which is milk enzyme is used as the indicator of the milk quality. This is so because its presence after pasteurization indicates the presence of microbes that have been kept inactive in pasteurization. An ordinary filter paper used in this detector which cut in to small holes using the hole puncher. These impregnated with chemical probes that reacts favorably with the ALP. The probes are antibodies that specifically stick strongly to ALP. When Alkaline phosphatase comes in contact with probe, it turns the whitepaper in to a colored one. These colors scanned by the mobile phones and compared with the standard readings. This gives the exact amount of the ALP. The 94 percentage of ALP can be detected. It takes 15 minutes to detect from raw milk to the pasteurized one. Also, you can check how to reduce stress naturally here and know more details about it.

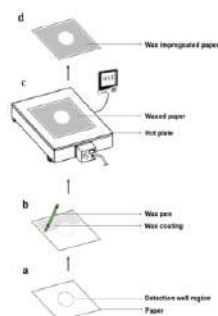
➤ How To Check Freshness Of Milk By Paper sensor:

The test is conducted on the milk samples taken from the villages and also spiked milk. It is also confirmed that the change in color is due to the presence of ALP not due to the presence of other vitamins or proteins. The paper sensor kit is very small in structured and made up of a 2 cm square transparent cellulose acetate film covered with another one. There are tiny holes through which we can inject the milk and the color changes can be detected using the mobile phones. The cost of the sensor is 80 to 125 rupees which is very affordable and it is very handy and can be used in large kitchens, milk dairies and places where milk freshness is concerned. The sensor works in both qualitative and quantitative type and no other separate reader required for this. Kuldeep Mahato a researcher worked with Dr. Chandra in this development. Soon the research results going to be published in the journals of biosensors and bio electronics. For more health updates, bookmark our page Timesalert and check out all the information related to health and many more.



➤ Quantitative analysis:

The processed images corresponding to the experiment described above are shown in figure 3d–f. The grey scale colour intensity is obtained from the measured red, blue and green colour intensity data by using equation (1): $GSI = 0.299 * R + 0.587 * G + 0.114 * B$, (1) where GSI is the grey scale intensity and R, G and B denote the intensity of red, green and blue colour channels, respectively [20]. Pure milk is white in colour and serves as the baseline for estimating average grey intensity values. All subsequent average grey intensity values are reported with reference to the baseline value. After adding iodine–KI solution, milk turns yellow and shows a slight increase in colour intensity, whereas, milk with starch shows a large increase in grey intensity because of bluish brown colour. These useful data can be used to estimate starch content. The average grey intensity values for the typical experiment described in figure 3 are shown in figure 4. Similar analysis was performed for all images acquired during the calibration experiments. As it is evident from figure 5, colour intensity in the detection wells increased with successive increments in concentration. Both RGB intensity values and average grey intensity values are shown in figure 5a and b, respectively. The y-axis on the plots represents normalized colour intensity values. Standard deviations for multiple measurements are shown in the plots.



➤ Conclusion:

This study demonstrates the development of a paper-based analytical platform for point-of-use applications. The device is made using inexpensive and commonly available raw materials, paper and wax, without the use of sophisticated equipment. It provides a portable and affordable alternative to conventional diagnostic and detection platforms. Image capturing using smartphones and processing allows us to obtain qualitative as well as quantitative results as per requirements. A proof-of-concept application is shown here by testing the feasibility of starch contamination detection in milk on the lab-on-a-chip platform. Similar strategies can be adopted for the detection of other chemical and biomolecular species.

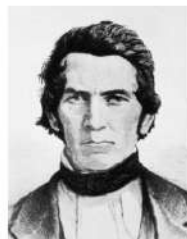
➤ Acknowledgements:

The authors gratefully acknowledge SRM Institute of Science and Technology for the use of services and facilities throughout the research work. The authors also thank Dr Prabhakar for insightful discussions.



NAME - PRASUN DUTTA
DEPARTMENT - CIVIL (B.TECH)
YEAR - 2ND
ROLL - 57

ECO –FRINDLY ELECTRIC CAR



In 1835, American Thomas Davenport is credited with building the first practical electric vehicle, a small locomotive. He developed a battery-powered electric motor which he used to operate a small model car on a short section of track. The first successful electric car was made in the United States in 1890. William Morrison of Des Moines, Iowa built an electric vehicle that could hold up to six passengers and could reach from 6 to 12 miles per hour. Specifications for the 1890 Morrison Electric included 24 storage battery cells mounted under the front seat. The vehicle could travel for a range of 100 miles before needing to be recharged.

Thomas Davenport

First Crude Electric Vehicle Is Developed

Around 1832, Robert Anderson develops the first crude electric vehicle, but it isn't until the 1870s or later that electric cars become practical. Pictured here is an electric vehicle built by



an English inventor in 1884.

INDIA

- India's first electric bus was launched in Bengaluru in 2014.
- The first inter-city bus service, from Mumbai to Pune, was launched in 2019.
- In October 2016, Ashok Leyland, launched the first 100% India-made electric bus. The series have been named Circuit and it can carry 35 to 65 persons at a time.



• As much as 25 tonnes of carbon dioxide (CO₂) emission can be cut every year for every diesel bus replaced by an electric bus, said the IISC study, conducted by Sheela Ramasesha and her group at the Divecha Centre for Climate Change in Bangalore. Electric buses emit no CO₂, but the electricity needed for their charging stations comes primarily from coal-fired power plants, India's primary energy source.

However, if solar panels are set up at battery charging stations of electric buses, the annual 25 tonnes of CO₂ emission per bus can be further reduced. Put another way, if 150,000 diesel buses were to be replaced by electric buses, 3.7 million tonnes of CO₂ emissions could be saved.

- Apart from reducing outdoor air pollution—which kills 670,000 people in India every year.

a clean bus system would aid national carbon-reduction targets. Transport accounts for a tenth of India's greenhouse gas emissions.

- The electric bus was not just cleaner for the environment but also made economic sense. The revenue generated by both buses was almost the same while profits, as we said, were 82% higher. This is because the maintenance and variable costs of the electric bus are lower than its diesel cousin and its energy efficiency is higher.

Parameter	Electric Bus	Diesel Bus
Average revenue per day (INR)	11,781	9,256
Average travel cost per day (INR)	2,064	4,843
Average profits earned per day (INR)	9,717	4,344

There is a huge buzz going in India and it is all about the Electric Vehicles (EV) revolution. The electric vehicles era in India has begun. India is in the hunt for the development options, where electric vehicles are the prey. Almost 60% of states in India being a part of electric vehicles mission by giving subsidies to EV manufacturers. It is predicted that 50% of vehicles in India will be electric by 2030 and this number increased by 90% in 2050. So let us have a look at the advantages and disadvantages of electric vehicles in India.

➤ Advantages Of Electric Vehicles In India.

▪ Public Transport –

To reduce congestion on roads, the cost of transportation for travelers, transportation energy use and negative environmental impacts electric vehicles plays a crucial role in easy mobilization.



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Image tweeted by @KPI1

▪ Sharing and mobility services –

EVs will improve the sharing and mobility services in India and improves the connectivity. Through EVs, we can connect electric vehicles and reduce the congestion conditions which leads to traffic jams.

▪ Clean and Green Environment -

Electric Vehicles are friendly to nature. Unlike fuel vehicles, EVs release 0% emissions into the atmosphere. Because of the clean and Green environment, the temperature levels will be under control.

➤ Advantages of Electric Cars In India



▪ EVs are Quiet and Smooth -

An electric car is easy to operate and smooth to handle. What surprises people more is the high torque offered by EVs. Step on the accelerator and power is delivered immediately to the wheels, providing an exhilarating driving experience.



▪ Easy Home Recharging -

For electric cars, we can full our own tanks. We don't need to feel worried about the nearest petrol bunk to refill our fuel tanks. All we need is a household charger to charge our electric car. Plug in the car at night and enjoy the ride in the morning.

▪ Less Fuel Cost for EVs -

When compared to petrol and diesel, electricity is cheap in India. Hardly 1.5 to 2 Units of power will be utilized for a full charge. There are fluctuations in diesel prices but electricity prices are mostly constant

• Less Maintenance Cost for Electric Vehicles -

Electric cars don't need engine oil and servicing for every three months. They are a one-time investment for lifelong benefits.

➤ Uses of Electric Vehicles In India



• Pollution Free-

Top developed cities in India like Delhi, Mumbai, and Hyderabad facing a common problem with Pollution. Electric Vehicles is the solution to all pollution problems in India. Electric Vehicles use renewable energy resources and pollution free resources like solar and electric power.

• Easy To Operate-

Electric Vehicles are very easy to operate because of the simplified design. Most of the electric vehicles in India comes with a single driving mode which is very easy to handle. Electric vehicles can handle by housewives, senior citizens, and students also.



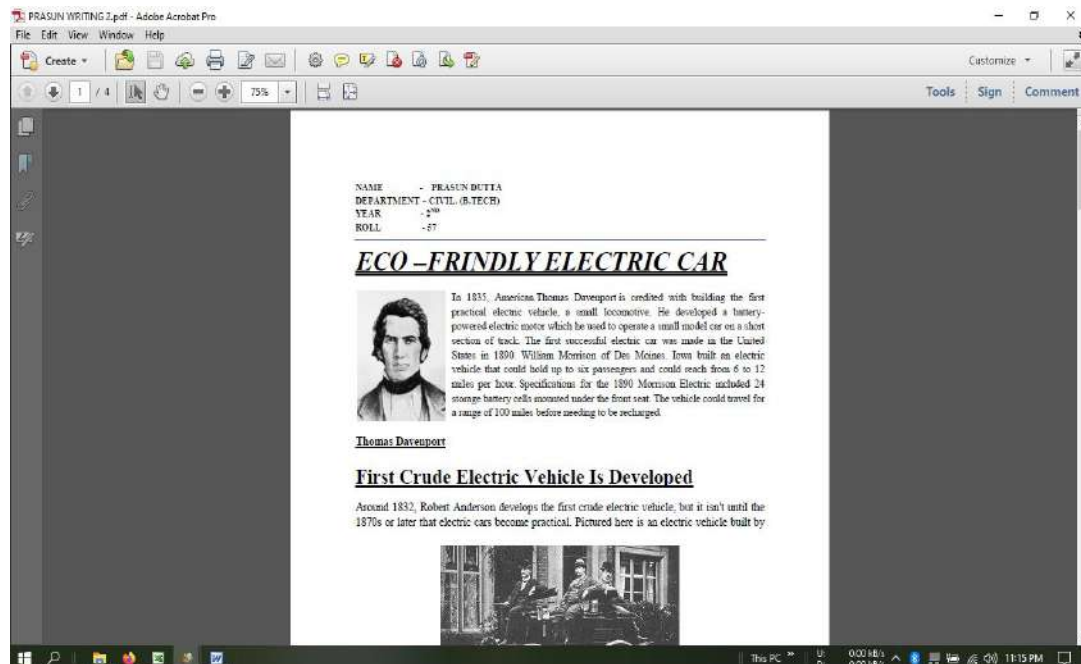
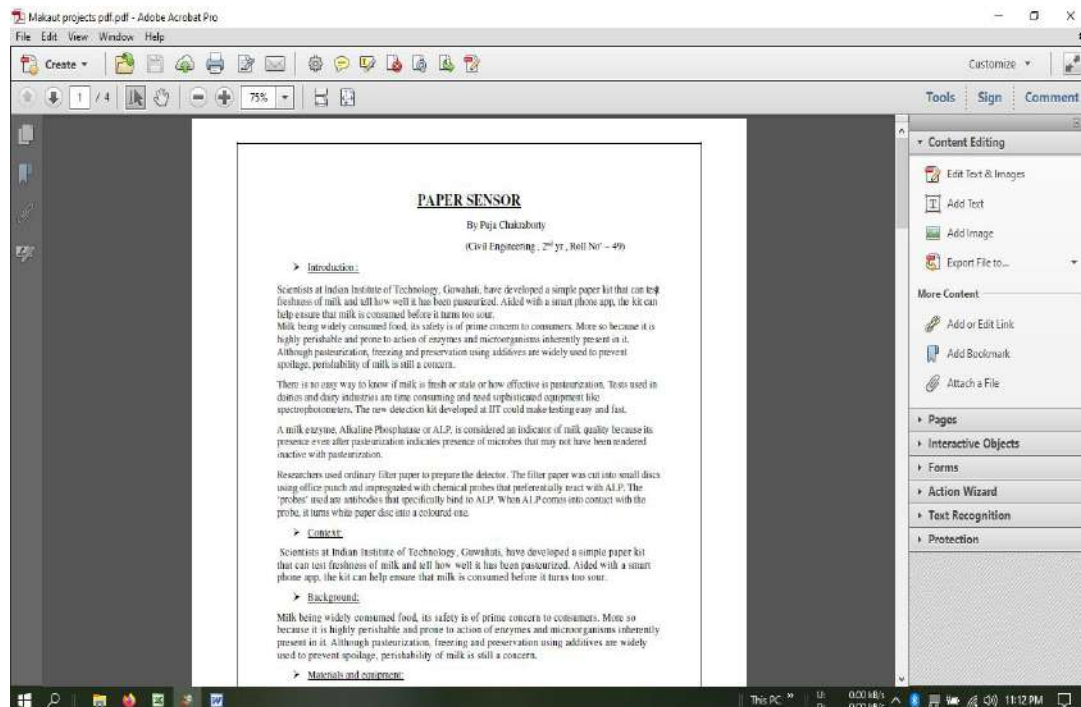


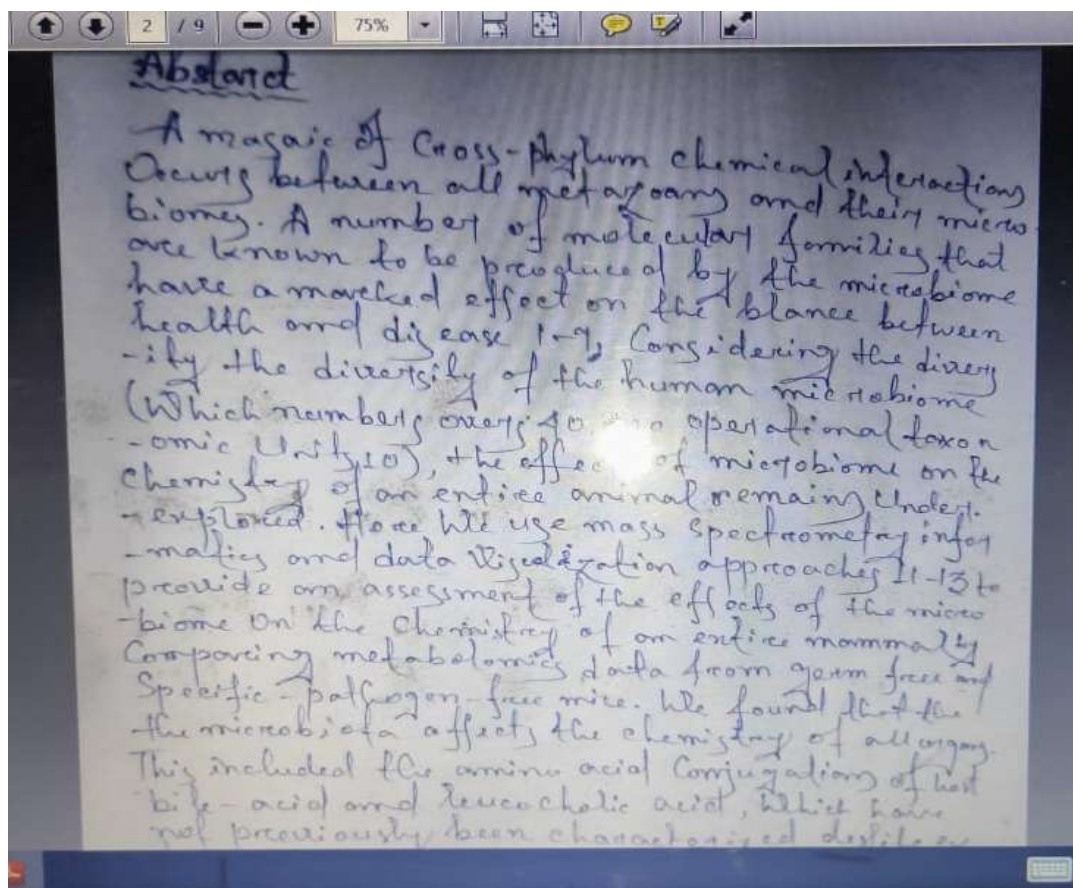
PINNACLE GROUP INITIATIVES ELITE COLLEGE OF ENGINEERING

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Some Photographs of the Event:







SCIENCE AND TECHNOLOGY IN INDIA

NAME-SOUVIK MAJHI, C.E-2ND YEAR, ROLL-64

Innovation has been constantly adding to the progress of humankind from the day when the wheel invented. seeking more effective means of employing available resource has been a counting endeavour ever since. In this, science and technology has played an important role. Science and technology (S&T) has made tremendous contribution to the advancement of human race.

1.1 Science policy resolution

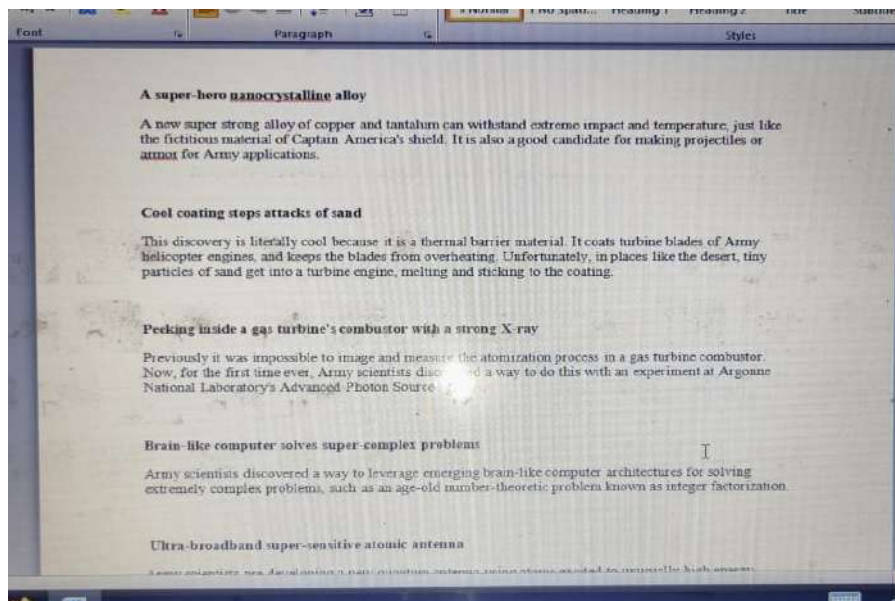
The government as well as the scientific community of free India realised quite early that science technology need to be fostered and encouraged in order to contribute to the agriculture and industrial progress of the country as well as to its defence.

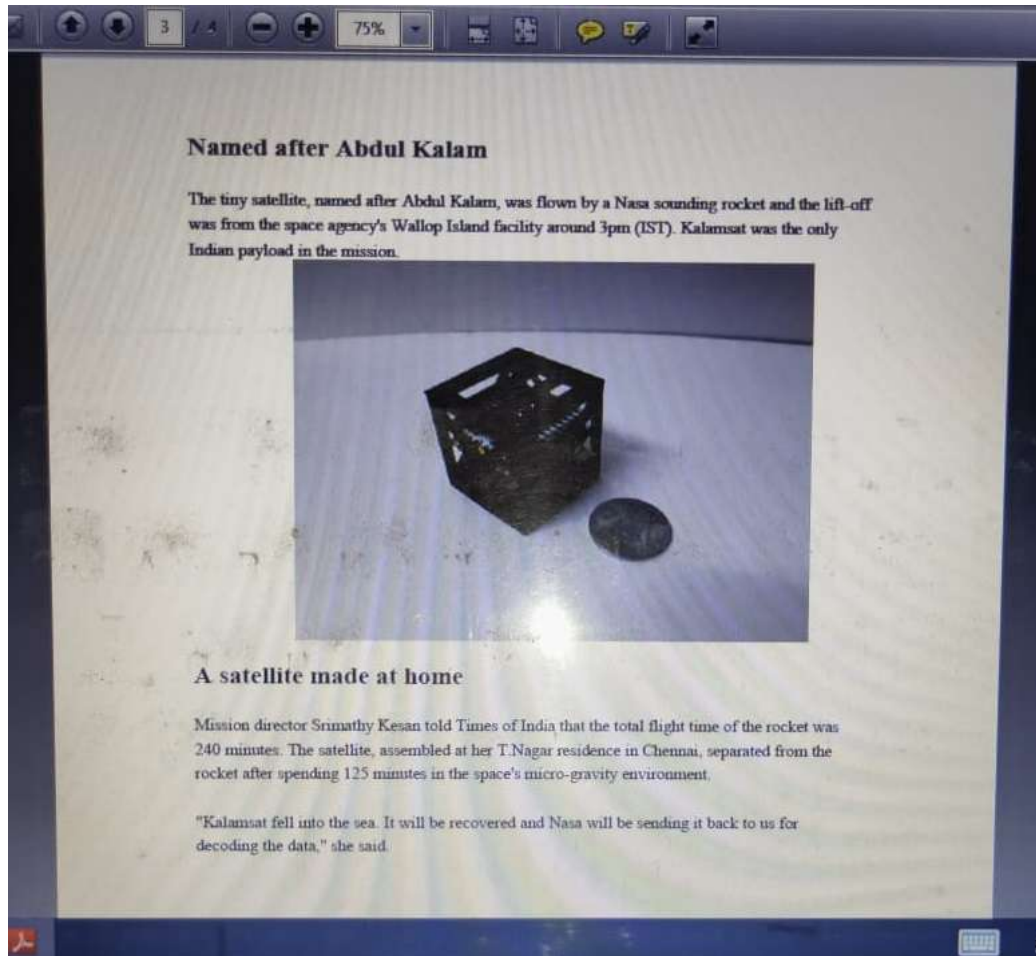
1.2 SOME IMPORTANT SCIENCE AND TECHNOLOGY AREAS

An attempt is made this section to explain the significance of space, lasers, information technology and electronics to briefly capture the progress that India has achieved in these areas.

- Space Technology

- 1. Satellites







4 / 5 49.7%

DISADVANTAGES OF GENETIC ENGINEERING → It creates deep cut legal liabilities with unintended consequences. It limits the amount of diversity that is available. It may have negative consequences when interacting with other species. It only protects the resilience effect. It does not guarantee higher nutritional values. It can lead to more birth defects.

APPLICATIONS → Genetic Engineering has great industrial and agricultural value. It is practiced in medicine, genetic research, agriculture, crop improvement and production of therapeutic drugs etc.

CONSIDERATIONS → There are ethical issues associated with the use of gene therapy and genetic engineering. It is a product. Also, to provide an economic value to the product, the genetic product the nutritional values are compromised. Also, the adverse effect of a new host and pathogenic strains are entered genes. Also, the side effects of gene therapy and the use of viruses in it are harmful to the target organism.

CAUTION CONCERNS → The increasingly rapid adoption of GEs being to question risks associated with GEs. This is generated by a significant lack of agreement among scientists and the general public about what these risks actually are. (Potential harm to health, potential environmental harm, potential harm to the environment, etc.)

PRECAUTIONS → The caution is to promote on the nation of nations of the not allowing risks to human health and the environment. It is not intended to the complexity and variability of the national environment and conditions. Humility about our ability to predict and control the risks of the nation of nations is to be applied.

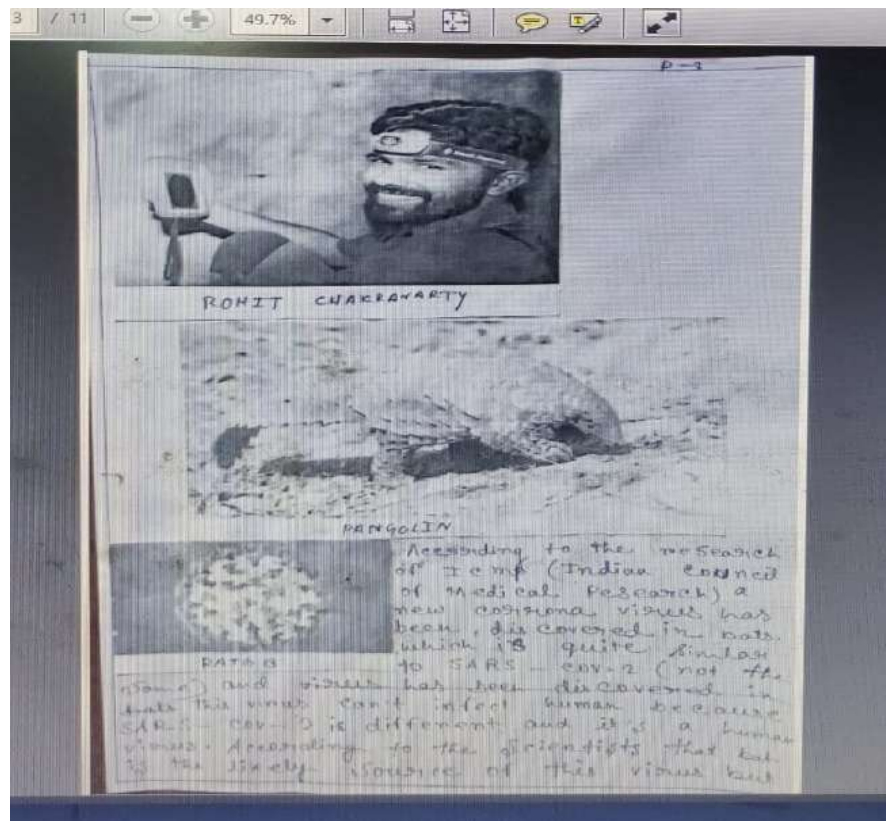
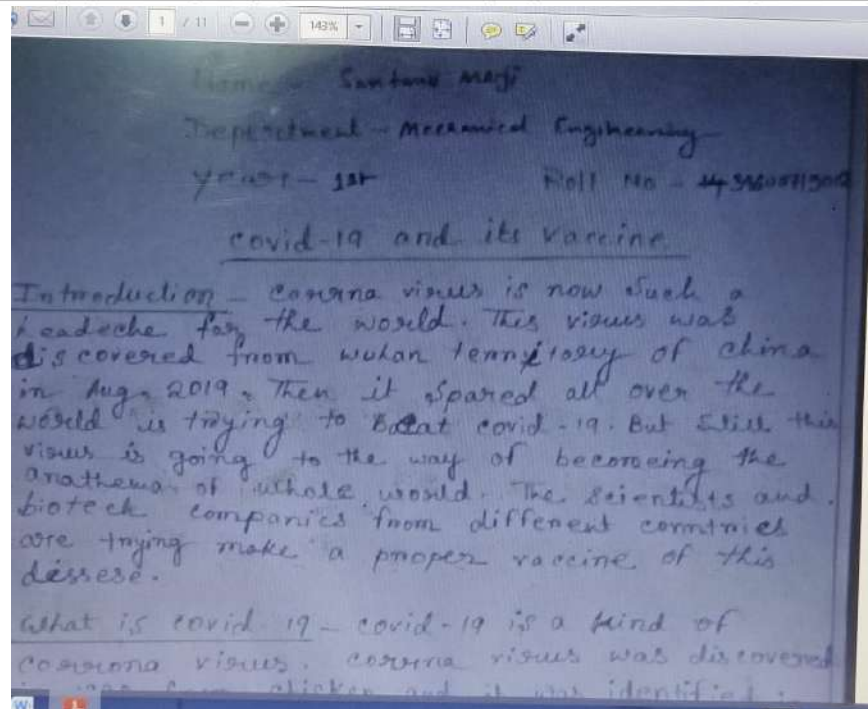
NASA launches world's lightest satellite designed by 18-year-old Tamil Nadu student



Smallest 3D-printed satellite

On Thursday, India once again broke a global space record by launching the world's lightest satellite weighing a mere 64 grams, called KalamSat, designed and developed not by professional space scientists and engineers, but by 18-year-old Tamil Nadu student Rifath Sharook and his team.







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Certificates of Online Writing Competition:





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Online Video Film Making

“Academic and Non Academic Activities in Home”.



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On line Video Film Making “Academic and Non Academic Activities in Home”.

Date: 23rd July, 2020.

Mode: Online.

Brief Description of the Event:

- The Students submitted their *video film based on the topic Academic and non-Academic activities in Home*
- Mr. Pallab Sarkar, Member of the of MAR committee told about the necessity of this video film making competition for the students and its impact included in MAR.
- Mr. Pallab Sarkar, Member of the MAR committee is the coordinate the video film making competition
- Dr. Krishna Hazra HOD of ME, synchronized the competition.
- Prof. Dr. S. Basack (Principal, ECE), Prof. Dr. B.G Gupta and Dr. K. Hazra chaired the position of judge for the competition.
- The most suitable candidate will be short listed with the help judge for the competition.
- The program was glorified with joyful participation of total 27 numbers of students. Splendid performance demonstrated by the students, who are waiting for this program.
- The topic of the video film making competition was decided by Dr. Krishna Hazra (Chairman of MAR) and Dr. Sudip Basack (Principal, ECE). A specific email id was given for the collection of all video films by the students.

Winner:

Puja Chakraborty, 3rd Year Civil Engineering.

https://drive.google.com/file/d/1BroeOaVnRPtCBY1J1uxsnssz0K8GMlpC/view?usp=drive_web

Runner-up:

Rabijit Dey, 3rd Year Electrical Engineering.

https://drive.google.com/file/d/1ddCOn04lukERLRNsAbJ38hozxpOgWvv/view?usp=drive_web



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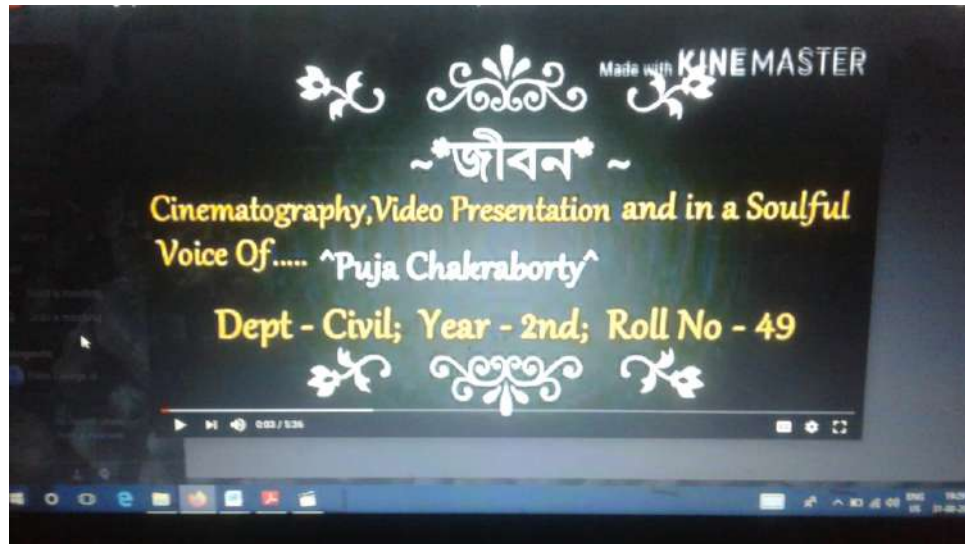
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Some Photographs of the Event:





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Certificates of Online Video Competition:





Few Words from the MAR Committee Chairperson

All members of the MAR Committee worked throughout the year with full dedication. All efforts were given to beautify the gardens and enhance their aesthetic appeal by the students as part of the MAR activities under the guidance of the MAR Committee. In addition, the committee also focused on maintaining and improving the standard of various MAR elements.

Dr. Krishna Hazra
Professor and HOD,
Mechanical Engineering Department, ECE
And Chairperson, MAR Committee

MAR Committee Members:

1. Dr. Krishna Hazra, Chairperson
2. Mr. Sourav Das, Convenor
3. Mrs. Alpana Saha Chowdhury
4. Mrs. Dipasri Saha
5. Mr. Souradeep Sarkar
6. Mr. Pallab Sarkar