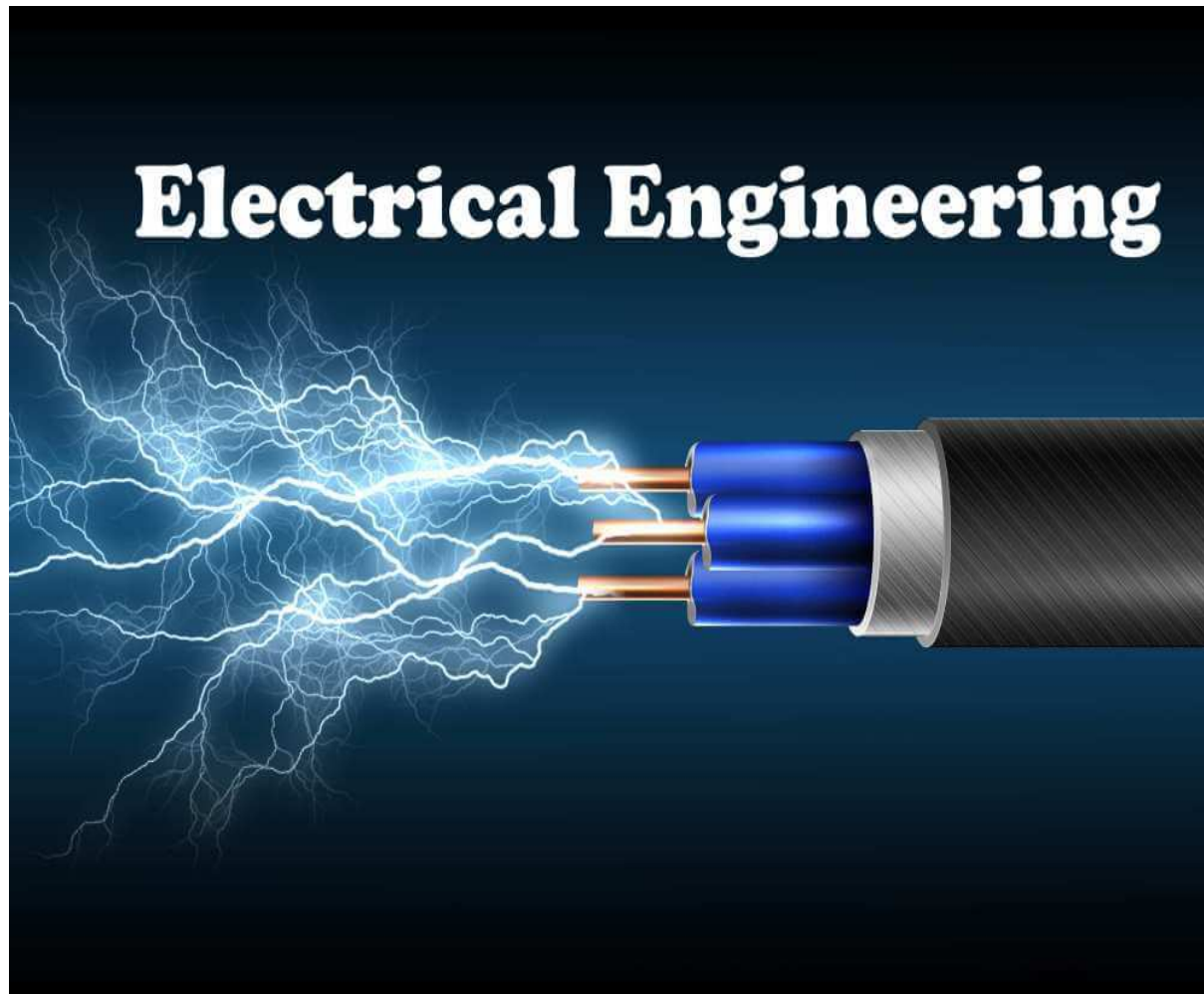




# URJA 2019-20



*Electrical & Electronics Engineering Department*  
*e-Magazine*



**Ultrathin 'E-Skin' Turns Your Hand into an Electronic Display**

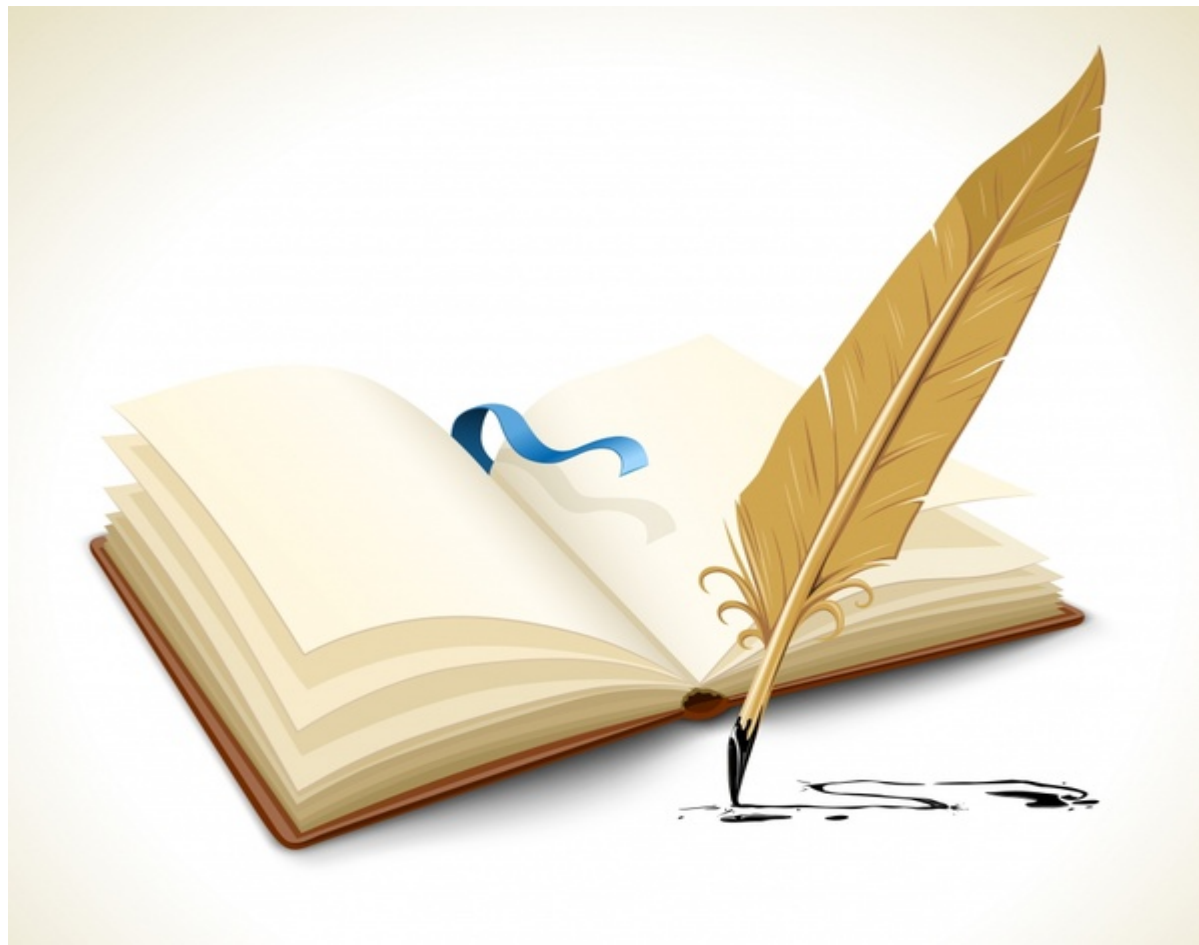
**Flexible Camera Wraps Around Objects to Capture 360-Degree Views**

**Women in the Indian Armed Forces**



- ❖ Editorial Board, Teacher Coordinator & Student Coordinators
- ❖ Director's Message
- ❖ HOD'S Message
- ❖ Articles

## Editorial Board



- ❖ Faculty Coordinator: Namrata Nebhnani
- ❖ Editor- in-Chief: M s. Dristy Raj
- ❖ Co-Editors : Ms. Aditi Katole

# Principal Message



Technical Education is the most potential instrument for socio-economic change. Presently, the engineer is seen as a high-tech player in the global market. Distinct separation is visible in our education between concepts and applications. Most areas of technology now change so rapidly that there is a need for professional institutes to update the knowledge and competence.

Institute of Engineering and Science, IPS Academy is a leading, premium institution devoted to imparting quality engineering education since 1999. The sustained growth with constant academic brilliance achieved by IES is due to a greater commitment from management, dynamic leadership of the president, academically distinctive and experienced faculty, disciplined students and service oriented supporting staff. The Institute is playing a key role in creating an ambiance for the creation of novel ideas, knowledge, and graduates who will be the leaders of tomorrow. The Institute is convinced that in order to achieve this objective, we will need to pursue a strategy that fosters creativity, supports interdisciplinary research and education. This will also provide the students with an understanding and appreciation not only of the process of knowledge creation, but also of the process by which technology and knowledge may be used to create wealth as well as achieve social economic goals.

I am delighted to note that the engineering graduates of this institute have been able to demonstrate their capable identities in different spheres of life and occupied prestigious position within the country and abroad. The excellence of any institute is a measure of achievements made by the students and faculty.

**Dr. Archana Keerti Chowdhary**  
**Principal**

## HoD'S Message



Our Country is passing through a critical phase of growth. If you take an over view of this growth, we find that we are developing new energy dimension and electrical energy plays the most vital part in total energy context. In fact, electricity is taking the role of indispensable energy form of our daily life. Ours is the sixth largest country in terms of global energy consumption. The last decades of economic growth of our country has brought an unprecedented demand for energy. The installed electrical generating capacity of our country stands at 162366 Megawatts in 2010, and is projected to be 950000 MW by 2030. This large scale use of electrical energy will definitely demand a large team of electrical engineers to manage its use. All the same there is continuous pressure of balancing our ecology especially in context to global warming. This is forcing to ensure efficient use of electrical energy. Electronic power control is offering new tools in management of electrical energy.

Electrical and Electronics engineering together is a dedicated branch of engineering to fulfill all challenges of electrical energy futures.

**Prof. Manish Sahajwani**  
**HOD**

## 1. Steps to a Winning Personality

**Develop Enthusiasm** A man who is full of enthusiasm about his work and his company can overcome a multitude of challenges and hardships. A spirit of sincere enthusiasm will help a man over many rough spots, and will carry on from one job to another. A man who is known for his enthusiastic personality is always in demand.



## 2. Good Grooming

Good grooming is a distinct promoter of a winning personality. A person's appearance is extremely important in this modern world, because people generally judge more from appearances than from what is not seen right away. A good first impression is important but spending too much on clothing is not necessary.



## 3. Develop a Winning Attitude

A man's attitude toward life is may be positive or negative, bright or gloomy. A person's attitude is so noticeable in his dealings with others. A bad or good attitude affects a person's reputation for better or worse. Attitude is largely a state of mind; and if your mind is taken up with pleasant, creative and constructive ideas, it will definitely reflect in your attitude. Attitude like positivity, poise, dignity, patience and kindness have a favorable effect in a person as a whole.



## 4. Aggressive But in A Good Way

When saying aggressiveness, it doesn't mean one who is always inclined to aggressive argument, or one who is always ready for a fight. Instead being aggressive in a good way, means being able to know what you want and knowing exactly how to get it. An aggressive personality like this is an asset especially in business.

## 4. Use Your Imagination

An individual must have creative imagination to become successful in any endeavour. Reality has its limits, but the world of imagination is boundless and continuous. Encourage your imagination to soar to distant horizons, and then bring what you can make the most out of it.

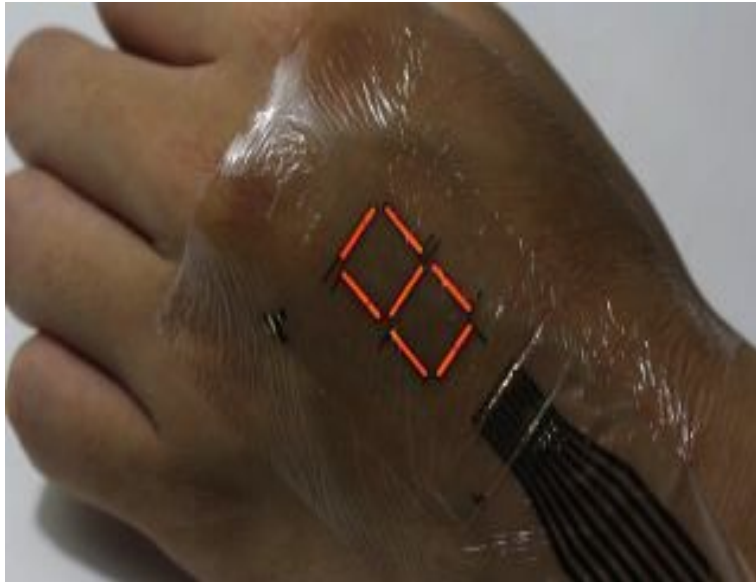


**Aditi Katole**

**EX IV Year**



## Ultrathin 'E-Skin' Turns Your Hand into an Electronic Display



Your Smartphone could one day be replaced by an electronic display laminated to the back of your hand, if the inventors of a new ultrathin "e-skin" have their way.

For the first time, Japanese scientists have demonstrated a super flexible electronic skin (or e-skin) display, made from organic electronics, that doesn't degrade when exposed to air. And crucially, the researchers used processes similar to the way organic light-emitting diode (OLED) displays are manufactured for conventional smartphones and TVs.

Organic electronics, made from carbon-based polymers, hold huge promise for wearable devices because they are far lighter and more flexible than traditional electronics made from inorganic materials, such as silicon and gold. But OLEDs and organic light detectors normally degrade in air, so they typically need bulky protective coatings that decrease their flexibility. Now, a team from the University of Tokyo has developed a unique method to create a protective coating that can shield the electronic components from the air while remaining thin enough to stay flexible.

**Doli Sahu**  
**EX IV year**

## Flexible Camera Wraps around Objects to Capture 360-Degree Views



A new camera that looks like a flat sheet of paper is so thin and flexible that it could be wrapped around everyday objects, such as desks, cars, streetlights and even clothing, new research shows. The new device could help turn any surface into a camera, and the invention may lead to card-size cameras that can flex in order to increase their field of view, the scientists said. Regular cameras take pictures from a single point in space, but this new device instead seeks to capture images using a flat grid of miniature cameras — a bit like an insect's compound eye "Wouldn't it be interesting to design a camera you can wrap around everyday objects to capture views that would be difficult to do with one or more conventional cameras?" said Shree Nayar, a computer scientist at Columbia University and senior author of the study. "Imagine wrapping it around a pole to get a 360-degree view of the world for security purposes," Nayar said. "Or, if you want your office desk to be more intelligent, have a sheet on your table that could analyze what's sitting on it." **video playing** "And, if you can work this into clothing, it could help people who are visually impaired be more aware of their environment," Nayar told Live Science. One possible approach for a camera that is a flexible sheet would involve rigid lenses attached to a pliable sheet. However, bending this sheet would result in gaps between the fields of views of adjacent lenses, the researchers said. This would cause the resulting image to have missing information, they said. Instead, the researchers developed an elastic sheet made of flexible lenses. No matter how this sheet is bent, there are no gaps between the lenses, the scientists said. Nayar and his colleagues developed a flexible array that consists of nearly 1,100 lenses made of silicone rubber. By optimizing the geometrical proportions of the lenses and the material properties of the sheet, the scientists found that this array could produce high-quality images even when bent and twisted.

The researchers tested how well their flexible lens sheet created images by focusing the light from all of its lenses onto a single regular camera. Future research still needs to devise a pliable grid of light-detecting image sensors to accompany each of its lenses and truly produce a camera, Nayar said. The researchers noted that, in principle, it is possible to fabricate a lens array the size of a credit card made up of millions of lenses. One day, it also may be possible to print both the lens and the sensor arrays together, Nayar said. Nayar and his colleagues Daniel Sims and Yonghao Yue at Columbia University will present their work on May 14 at the International Conference on Computational Photography at North western University in Evanston, Illinois.



# **Women in the Indian Armed Forces**

Society is gradually moving towards becoming an egalitarian community, however, there is still this social stigma where women in the armed forces are considered unfit for combat roles. Women are currently only commissioned in the medical, legal, educational, signals and engineering wings of the army.

Although the Indian Air Force and the Indian Navy do allow women in combat roles. In 2017, The Indian Army had announced that they will recruit women in combat roles. But, in November last year, Indian Army Chief Gen Bipin Rawat commented that the Indian Army is not ready yet to have women in combat roles.

## **Women can Perform as Good as their Male Counterparts**

Out of the five big personality types – extroversion, agreeableness, conscientiousness, neuroticism, and openness to experience; militaries prefer conscientious. Conscientiousness contains the quality of self- efficacy, orderliness, dutifulness, being resilient and having self – discipline, and cautiousness which are more common in women. more women also tend to be better are multi-tasking, stress management and have strong psychological abilities which are essential qualities while serving in this field. Also, women who volunteer are much more driven than males who have drafted. Certain sensitive and delicate jobs in the armed forces require intrapersonal skills and communicative skills which are highly developed in women.

Some male soldiers who have been brought up traditionally, have been taught to protect women at all times. Seeing them struggle during combat, they may falter and be emotionally conflicted which may distract them from completing the mission. Some men do not have the experience to work with women and may not know how to behave. However, the armed forces have a strong judicial system and women have the full right an opportunity to let their voice be heard against any harassment.

**Roopam Sahu**  
**EX IV Year**

**Shubham sharma**  
**EX III Year**

## Students Achievements

S.No.	Enrollment No.	Name of Student	Company Name	Package in Lacs
1	0808EX161048	Sourabh Singh Thakur	TCE/ TCS	4.5/3.36
2	0808EX161019	Drishti Raj	TCE	4.5
3	0808EX161004	Aditi katole	TCE	4.5
4	0808EX161031	Nivesh Pipada	Radix Electro systems	2.0
5	0808EX161026	Kritika	Radix Electro systems	2.0

## Alumina



**PARVEZ KHAN** (Batch 2015)  
IPS ACADEMY, IES  
(Electrical and Electronics Engineering Dept.)

Played Inter University all four year , represented RGPV [First year Sagar, Madhya Pradesh , Second year Jaipur, Rajasthan, Third year Rourkela, Orissa, Fourth year, Bhopal Madhya Pradesh, Manager of Hockey Madhya Bharat's sub junior team at 6th Hockey India Sub junior mens national championship 2016, held at Imphal, Manipur 2015-16 worked at K. Tech Resourcing. In 2017, participated HOCKEY MADHYA BHARAT's Sub junior women's hockey team as a COACH - 7TH HOCKEY INDIA SUB JUNIOR WOMENS national championship held at RAMNATHPURAM, TAMIL NADU Also played 7th HOCKEY INDIA SENIOR MENS CHAMPIONSHIP HELD at Lucknow, up representing HOCKEY MADHYA BHARAT'S senior men's team He is now coach of D.H.A( District Hockey Association, Neemuch) and also coach at hockey feeder center Neemuch working under DSYW office (Khel Avam Yuva Kalyan Vibhag) also, a Physical Educator At Carmel Convent School Neemuch.

**ADITYA NAGAR (Batch 2014)**  
**IPS ACADEMY, IES**  
(Electrical and Electronics Engineering Dept.)



Aditya's journey started in college similar to everyone in the first year of engineering in Electrical and Electronics Branch. He was excited to learn and perform in this new phase of life. He started tinkering with robotics and electronics and used to pursue his hobby after college hours. During the time, when tech-fests were just-in thing, he started participating in many inter college events of Robotics and Automation. He won several events in his first and second year in IITs and NITs and brought recognition to the institution.

After scoring a fair share of accolades for himself, he started mentoring junior students and motivated them to take part in such events which further continued the spirit of participation. In parallel, he started working on Unmanned Aerial Vehicles (UAVs) during his second year as a hobby and during the same year started to import, assemble, supply and maintain UAV systems to several organizations and Individuals in India and started his journey as an entrepreneur. His company's name is GALACTIC HOBBY SQUARE est. in 2012. He completed his engineering in the year 2014 and his company's turnover was 7 million at the time.

In 2018, he launched his second venture, Blacksof which deals in to providing design solutions to brands and in a span of 18 months his team has grown from 3 to 30. His journey was crucial and full of struggles during this time to become an entrepreneur. His plans are to take both the companies to great heights and we wish him abundance of success.

**Few things he believes in**

**“Language is the sharpest and deadliest assault weapon to win any war”**

**“India is a follow up country, even a cow will not give milk without follow-up”**

**“Meet fools often than intellectuals, they teach you more”**

With Best Regards  
Aditya Nagar  
Co-Founder & CEO  
BLACKSOF  
Phone : +91 96172 71343

## POEMS

### WAQT SAB BADAL DETA HAI !!!!!

*Waqt bhi kya khel khelta hai. Sab rishte badal kar rakh deta hai !!*  
*Kabhi jo apne the unko paraya kar deta hai !! Aur jinko ham jante bhi nahi the.*  
*Unse ek apna sa rishta jod deta hai. Kahte hai na waqt sab badal deta hai...*  
*Agar khooda kabhi mere se meri iksha puche !! To mai to; Ek hi cheez mangu khooda se*  
*Lauta do mujhe mera Oo haseen sa Bachpan !! Jahan! sabko ham apna mana karte the.*  
*Dekhte hi dekhte sab badal jata hai !! Kahte hai na waqt sab badal deta hai...*  
*Aaj jab mai piche mud kar dekhti hu !! Tab; Me khood soch me pad jati hu.*  
*Yar ! Kitna kuch jindagi ne badal kar rakh diya. Aur mujhe waqt ka ehshash hi nahi huva.*  
*Aaj har ek haseen lamha; ek yaad ban kar rah gaya hai. Kahte hai na; waqt Sab badal deta hai !!*

Ritika Jain  
ritikajaintkg2000@gmail.com)  
(EX 2<sup>nd</sup> year)

### आज भी.....

आज भी.....  
कुछ कुछ धुंधली सी याद है...  
दौड़ हो आज की या हो पहला  
कदम,

टीचर ...  
तब साथ थी आप मेरे आज भी  
आप मेरे साथ है

वो घर के लिय मेरा रोना  
वो बार बार माँ को पुकारना  
ये देख आपका प्यार से टॉफ़ी  
देकर फुसलाना  
आज भी.....  
कुछ कुछ धुंधली सी याद है.....  
तब साथ थी आप मेरे आज भी  
आप मेरे साथ है

वो मेरा डर के अकेले चुप चुप  
रहना  
जिंदगी की पहली सीख वो दोस्ती  
की रीत  
आपने ही तो हमारी बात करवाई  
थी  
वो धीरे धीरे बात करने पर  
आपका डाटना  
आज भी.....  
कुछ कुछ धुंधली सी याद है....  
तब साथ थी आप मेरे आज भी  
आप मेरे साथ है

क ख ग ....से आज की दुनिया में  
खड़ा होना  
सफल हो परीक्षा में या हो अंको  
का रोना  
जीत हो या हार...

आपकी डॉट हो या शाबाशी में  
छुपा प्यार  
आज भी....  
कुछ कुछ धुंधली सी याद है....  
तब साथ थी आप मेरे आज भी  
आप मेरे साथ है

अब ये याद धुंधली नहीं होने देंगे  
जीत के रुतबे में आपका साथ न  
खोने देंगे  
आपके आशीर्वाद की फ़रियाद है,

टीचर ....  
तब भी आप हमे याद थी....  
आज भी आप हमे याद है....  
तब भी साथ थी आप मेरे आज भी  
आप मेरे साथ है....

By Drishti Raj  
(EX 4<sup>th</sup> year)

IPS ACADEMY, IES

## Haan Mai Ek Ladki Hu

Haan mai ek ladki hu  
Aur mujhe padhna hai  
Mujhe shadi to krni h  
Pr abhi bahot kuch krna ha  
Maana maine scooty h hamari  
Pr bullet pe sawar mujhe miloo bhi to chlana hai  
Maana mujhe ghar badlana h  
Pr konsa ye mujhe tay krna hai  
Haan zindagi di h maa baap ne us rab ne us bhagwan ne  
Pr marne se phle mujhe bhi to jinaa hai  
Mai bahut nazuk hu  
Pr kya kru hwa ke jhonke se to ladna hai  
Mai hak deti hu tujhe mujhe samjhane ka, btane ka, manane ka  
Pr faisla mera hai aur mujhe hi krna hai  
Haaan mai ladki hu  
Aur hak mera hai mere faisle krne ka  
Na wakt nah insan nah bhgwan  
Hak nhi kisiko mere sapne chinne ka  
Haan mai ladki hu  
Pr mujhe abhi bahot ghumna hai  
Shadi to krni h  
Pr abhi thoda aur  
Bsss thodaa saa aur khud jinaa hai  
Haan mai ladki hu aur mujhe padhna hai abhi mujhe bahot kuch krna h .....  
Bahot kuch krna hai....



By Drishti Raj  
(EX 4<sup>th</sup> year)  
IPS ACADEMY, IES



## **Mann ki Baat**

Man ki baat man me rakhoge..  
Baato ka ped ban jaega...  
Aaj Jispr hara h patta..  
Kl ko shakh se wo pttaa jhad jaegaa..  
Aaj jo chla gya ye mousam..  
Kl ye mousam hi dubara wahi  
Phul Nahi khila paega...  
Ab aae basant ya barkha aae  
Sawan ka mahina bhi..  
Usii patte ko phir nhi khoj paega...  
Patta baat h mn ki ....mausam h  
Ye pal jo abhi phir beet jaega..  
Sakh se tute patte ka koi mol nhi  
Ye pal bita to mn ke ahsaasoo ka mol ...bss kuch ankahe shabd ho jaegaa...  
Phir ye mousam jarur loutega..  
Wakt phir blegaa..  
Pr sayad wo baat jo pichle sawan  
Barkha ki bunde...thi  
Aaj wo lavz tak bin aae...  
Khokr apna mol khi gumsum chhup jaega...  
H jaruri pyar ka har bol ..  
Aaj aaya h mn me aaj khol do..  
Wrna khi kl aandhi me  
kahani ka koi dusra panna khul jaegaa...  
Pichla panna yaad to hota h  
Lekin aage ke panno me uska mol  
Dheere dheere khi khoo jaegaa...  
Mn ki baat mn me raakhoge  
To baato ka ped lag jaegaa...



*By Drishti Raj*

*(EX 4<sup>th</sup> year)*

*IPS ACADEMY, IES*

## ***Ye Meri Is Baar Aakhri Hai!!!***

Jaane kitna gussa jaane kitne pyaar badi se badi gaali choti se choti baat bolne ke liye mauka aakhri hai...!!!!

Har semester me the ki agle se padhenge sochte sochte waqt nikal gaya aur ab ye exams akhri hain...!!!!

Kitni baatein adhuri rahi jane kitne puri hui yaaron ki ye baat is bar aakhri hai!!

Wo birthdays or parties under graduation ki ye raat aakhri hai...!!!

Har baat pr treats har treat pe masti ye yaadein banane ka ye waqt aakhri hai

Engineering ke 4 saal ka jashn bhi khatam huua or ye safar bhi khatam hone Wala h

Mera ye semester is bar aakhri hai!!!

SALUTE TO THESE BEST 4 YEARS OF MY LIFE



*By Aditi Katole*

*EX(4th year)*

*IPS ACADEMY, IES*