E-BULLETIN

DEPARTMENT OF PHYSICS

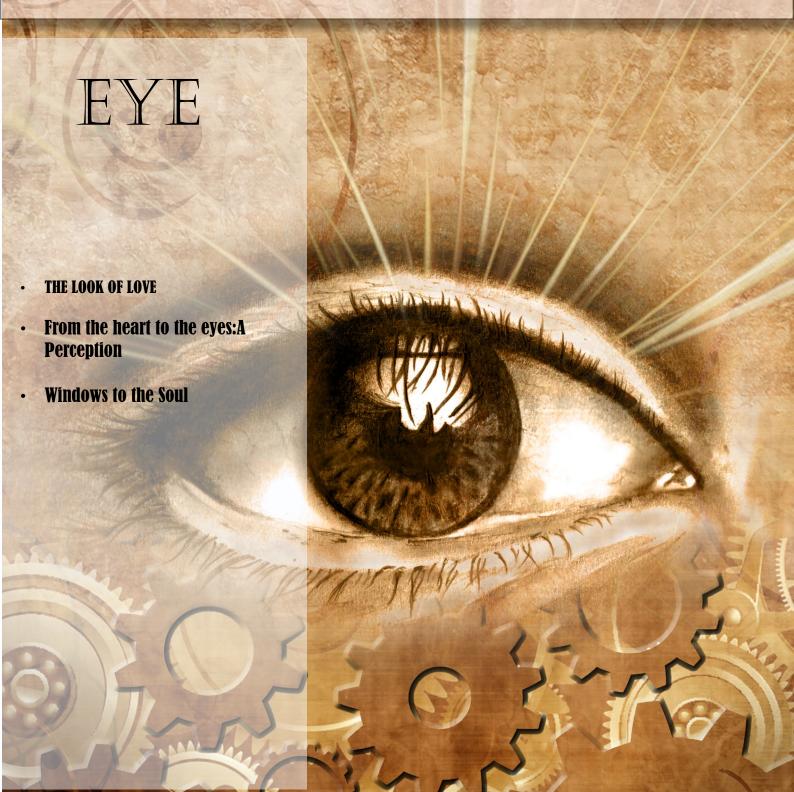
september 12 ,2018 1st issue



AURORA

The world only exists in your eyes. You can make it as big or as small as you want.....

F.Scott Fitzgerald





Editor:

Bhagyashree Gogoi. Sub-Editor:

> Himanshu Phukan. Madhurjya Boruah.

Faculty Incharge--



Jayur Tisso

Page designed by--



Himanshu Phukan

Image edited by--



Madhurjya Boruah

Cover Page designed by-



Arshad Hussain

EDITORIAL

Dear Readers,

You have in your hand "AURORA" the official e-magazine of Physics Society, J.B. College. It captures the organ eye, it's definition, analysis and related documents in scientifical, philosophical, physical and psychological respect.

Eye is the organ of sight. Eyes are probably the most important symbolic sensory organ. They can represent clairvoyance, omniscience and it is a gateway into the soul.

"The eye is like a mirror, and the visible object is like the thing reflected in the mirror."---- A vicenna, early 11th century.

Many ancient physicians and philosophers believed in the idea of the active eye. The eye

was a subject of special interest in medieval Islamic medicine and philosophy.

Eyes are even more beautiful when you see them closer up than you could ever imagine seeing them with your own eyes. Eyes are truly amazing in how much emotion can be conveyed through them with the smallest of movements.

A common saying is "Beauty is in the eyes of the beholder", which means beauty doesnot exist on its own but is created by observers. But mathematically if beauty is in the eye of the beholder, then mathematicians must have a curious eye indeed. In a study earlier in Frontiers in Human Neuroscience, researchers found that when 15 mathematicians viewed "beautiful" equations, the same area of the brain was activated as when people listen to music or look at works of art that are considered beautiful. This magazine is not the outcome of the effort put in by an individual, but in the immense effort put forwarded by, first and foremost our Ankur Gogoi sir and then the editorial board, all teachers and dear students of dept. of Physics, J.B. College, Jorhat. We apologize for shortcomings and hope you will cherish our efforts.

The editor:



Bhagyashree Gogoi. 5th semester, Dept. of Physics

Other members of Society

- Zafreen Akhtar Ahmed
- Bhobisnu Goswami
- Susmita Sen
- Taniya Sonowal
- Partha Sarathi Gogoi
- Bhargav Khound
- Prachurjya Gogoi
- Shilpistuti Bora
- Ruhi tabassum Hazarika
- Rohan Bhattacharya
- Kashyap Kaushik borah
- Angshuman das

CONTENTS

ARTICLE	
Windows to the soul	1
 Dreams in my eye 	2
The look of love	3
 Intuition and Insight 	4
 The Irony of "The eyes have in the eyes have." 	it" 5
 Consciousness and Scientific 	
STORY	
• "From the heart to the eyes:A I	Perception 7
Letters In Braille	8
POEM	
In Your Eyes	9
• Eyes	9
 Dristir Hipare(Assamese Poer 	n) 10

RECENT TEACHERS ACHIVEMENT

PHOTO GALLERY

STUDENTS ACHIVEMENT

FACULTY MEMBERS

WINDOWS TO THE SOUL

When looking at the face, eyes dominate emotional communication"- Adam Anderson, professor of human development at Cornell University and co author of the study.

We can analyze a person's emotion by analyzing their expression, in their eye. Aperson's emotion such as discrimination, disgust, suspicion and sensitivity, etc is related to aperson's eye.

According to new research by Cornell University College of Human Ecology, analyzing a person's emotion by the expressions in their eyes is a process that started as a universal reaction to the environmental stimuli and evolved to communicate our deepest emotions. The study consistently associated with narrowed eyes, enhances visual discrimination by blocking light and sharpening focus and this happens because of emotions related to discrimination such as disgust and suspicion. On the other hand the open eyes which expand field of vision with emotion related to fear and awe.

According to Anderson's 2013 research, human facial expression such as raising one's eyebrows, arise from universal adaptive reactions to one's environment and did not originally signal social communication.

These support Charles's Darwin's 19th century theory on the evolution of the emotion, which hypothesized that our expression originated from sensory function rather than social communication. In this regard Anderson said "what our work is going to unravel are the details of what Darwin's theorized: why certain expression look the way they do, how that help the person perceive the word and how others use those expressions to read our innermost emotions and intensions

~~Farheen Yesmine Khan
1'st Semester

DREAMS IN MY EYE

Dreams about eyes may be referring to our sense of right, our perception of the world around our insight. A dream about having something in oour eye may symbolize something that is preventing someone clearly. To dream of two pairs of eyes may telling us to have another pair of eyes.

Dreams about someone else's eyes to see or look into a stranger's eyes may be an indication that we are not recognizing us.Not seeing someone as they really are,we may take another look at them and trust our insights.

A dream about blue,green,black eyes may represent someone who has that colour of eyes-

- Green eyes may symbolize seeing someone through flalous eyes.
- Blue eyes may symbolize sadness, grief or depression.
- A black eyes may represent an innner conflict.

Nearly everyone has had a dream at somepoint in life, even blind people are known to dream. Dreams are nothing but our thoughts, imagination which display our eye.

~~Liza Dutta 3rd Semester



THE LOOK OF LOVE (THE STRONG BOND OF HUMAN CONNECTION)

ove is the most wonderful and power ful emotion a human can feel and experience through his/her life.Love ignites a strong bond of attraction between two peaople .Human shares and expresses love with a behaviour which is different from the kingdom of other animals.Love is the part of a human life .Eye a part of a human body, gives us the feeling of sight and vision of the beautiful world .people says,"the eyes are the window to the soul",but we expresse our attraction towards somebody througgh our eyes.The eye contact of two lovers is the fiundation of the dance of intimacy.

PROLONGED EYE CONTACT CAN CAUSE ATTRACTION

EYE/CONTACT is a powerful stimulator of the affection. The more dilated your pupils, the more attractive you seem. According to a study of Edinburgh University, women are more attached to the size of a mans pupils. This likely connected to the finding that our pupils dilate when focused on someone we find attrative.

EYE CONTACT MAKES US FEEL GOOD AND CONNECT US

Prolonged eye contact has been thought to release of oxytocin, the love chemical most closely associated with longer term bonding and commitment.

EYE CONTACT INDICATES LASTING LOVE

A famous experiment by Havard psycologist ZICK RUBIN found that couples who uwere deeply in love after several years lokked at each other 75% of the time while talking versus the average 30-60% of the time.

THE EYES AND LAW ARE CONNECTED VERY STRONGLY

The eyes will tell you if asmile is real ofr fake. Psycologist Paul Ekman hs distinguishes smiles that might be used to feign happiness or cover some other emotion. When forming a real smile, the eyes narrow and create lines at the outer corners.

MUTUAL GAZE IS A SIGN OF LOVE

Research on love and attraction has found that ,utual gaze -Staring is to eachothers eyes is a good practice of two individual being 'in love'. So,at last it can be concluded that eyes which acts like a digital camera can give us a good result to creae a strong bond of attraction with some one else . And the eye also helps people to build a strong bond.

~~Bikon Rabha 3rd semester

INTUITION AND INSIGHT:

(TWO PROCESS THAT BUILD ON EACH OTHER AND FUNDAME TALLY DIFFER.)

Intuition and Insight are intriguing phenomena of non -analytical mental functioning. Intuition denotes ideas by sensing the solution without any explicit representation of it. Insight has been understood as sudden and unexpected apprehension of the solution by the single elements of a problem. By face validity the two process appears similar. According to a lay pe spective ,it is assumed that intuition proceeds insight. But scientific conceptualizations of insight and intuition consider the two process to differ with regard to their continuous unfolding. That is , Intuition has been understood as an experience - based and gradual process where as insight is regarded as genuinely discontinuous phenomenon.

There are situations in which desicon makers arrive at an idea or decision not by analytically inferring the solution but by either sensing the correct solution without being able to give reasons for it, or by realizing the solution all a sudden without being able to report on the solution process. Roughly ,the former phenomenon has been called intuition the later insight .Both have fascinated the public as well as the scientific audience.

Although most people intuitively know what intuition is ,the scientific community is split over its definition as well as its conceptualizations. Firstly ,there is the aspect of non-conscious processing with very little awareness about the underlying cognitive processes so that people are mostly not able to report on these. Secondly, there is the aspect of automaticity and uncontrollability. Intuinitive processing appears in the form of spontaneous and instantaneous ideas that cannot be intentionally controlled in the way that they cannot be evoked or ignored. Lastly , there is the aspect of intuition of action. The nonconscious, experience-yeong and unintentional pracers process finally results in a strong tendency towards a hunch ,which serves a strong go - signal to initiate action. As a result people act in accordance with their intuitive impression or feeling.

In contrast to the above elaboration on intuition, the term insight has been used to refer to the sudden and unexpected understanding of a previously incomprehensible problem or concept.In this sense ,Jung - Beenanet explicate the nature of insight as the recognition of new connections across existing knowledge.Sometimes the solution to a difficult problem may suddenly pop out in the mind and the desicion maker or the problem solver may immediately recognize the complex nexcuses.Such insightful solutions are associated with a privledged storage in long term memory .

After having defined both cognitive phenomena intuition and insight ,it becomes obvious that both share a similarity in terms of persisting conceptual difficulties. Yet ,both process can be viewed as non -analytic solution on thought process where no incremental search take place.

THE IRONY OF "THE EYE HAVE IT"

T he nature of beauty is one of the most enduring and controversial themes in western philosophy. Beauty has traditonally been countered among the ultmate values, with goodness ,truth and justce.

In "The eyes have it" we have the theme of kindness, determinaton, independence, desire, percepton, memory and confdence. Not far into the story, the reader discovers that the narrator is blind but apparently has not always been. Riding on a train and sitng in a compartment provided the setng of the story.

The narrator listens as a couple sends their daughter of on the train to visit an aunt. Throughout the story the narrator shows kindness to the young woman in the compartment. He compliments her when he can which is somewhat ironic considering that he cannot see.

Initating the conversation the narrator gets intrigued by the girlys voice. The narrator is on his way to Dehradun to Musooria. Hoping to keep her from realizing that he is blind, he describes the scenery from his memories. He also asks the girl about the scenery outside and she tells him to look out the window for himself. To continue the rush he tells the girl that she has an interesting face. She remarks that people usually tells her that she has a prety face. Her trip is short, so soon she gathers her things and bids good-bye to the blind man. One thing that he remembered afer she lef was her perfume.

"You may break, you may shater
The vase if you will, but the scent
Of the roses will linger there stll....."

A man coming into the berth runs into the girl. The other man comments that the narrator must be disappointed that the new fellow traveller is not as nice looking as the girl. Remarking that she was interesting, the narrator ask about the girlys hair. But the other man said he notced her eyes but it was of no use to her. She was completely blind.

The reader receives an extra jolt at the end of the story. When he learns as does that narrator that the girl was blind. Both blind neither realizes that the other one is aswell. Ironically, the narrator makes a statement that had he not been trying to fool the girl, it might have clued him into her blindness.

This story is an example of situatonal irony which employs a plot device in which events turn out contrary to expectation yet are contrarily appropriate.

Mason Cooley stated : "Irony regards every simple truth as a challenge"

The truth here is that everyone was duped. Here the two blind people are the main characters, yet neither knows that the other one blind. The narrator fooled himself. Apparently, he also misleads the girl because she did not realize that her fellow traveller is blind either.

Bhagyashree Gogoisemester, dept. of Physics



FROM THE HEART TO THE EYES:A PERCEPTION

2:15 a.m., the pressure in me building up with every passing minute, and I felt a need. "What happen? Haven't yet completed?" momentered the room and asked. Looked at her drowsy eyes I replied, "Yeah Mom, I just want to work hard for this upcoming concert and these lyrics and the music are not cooperating with me." She came nearer and just kept running her fingers over my head, comforting me she said, "Take some rest son, have faith and I know you can do it."

Keeping aside very single page, she went through the lyrics ---

"... one pair of candy lips your eyes full of terror and glee hair like the branches of a tree and your smile is what I only need ...

"Eh! some love things ha ?"With a teasing smile she said, "So my son is In love. To some surprising extent I replied, "Mom please, romance is secondary for survival right now.""The problem lies right there. You are just surviving and not living your life, she said. And suddenly I got stunned for a few minutes. Getting off the chair, I lied down on my mom's lap. "See son, from the last couple of years you have become so much confined to your work that you turned to a restless person now, and so your restless brain could not but make your lyrics incomplete. The truth in those tender words of my mom spiked me like a thorn. "What should I do then mom?" I asked. " It's so simple, make love and give love by changing your vision of eye," she said. "You mean to say I should love a girl and later on waiting for my family to continue for happiness." "No, I am just saying fall in love and feel the love naturally with no biasing. It is then your beautiful eyes and your heart will coincide with your imagination and the outcome will be your pure lyrics." "But mom, I have seen people crumbling down into ashes after break ups and roaming the streets with a broken heart and a fake smile and thus love fails ." Taking a deep breath with a pleasant smile she replied, "Love never fails son, people fail on love and later on blame it. No one fails exactly, it is just the perception of our eyes about others."

Her energetic words just made me fall for her once again and hence my ever true love she

~~Partha Sarathi Gogoi (3nd Semester

LETTERS IN BRAILLE

It was a usual day at home; no visitors nor anyone died that day. I just lay on the arm- chair reading what normal people call a "blank paper". It was not completely blank though, it had dots inscribed on it. Though my grandchildren sometimes take them from my shelf to draw pictures when I am away. I would come back only to feel three Triangles placed on it one afer another and a circle above them. I would find a fresh paper with new doted patern on every eighth morning.

It has been going like this for three years now and believe me no one wants to be dead for so long. My corpse is stll kept in the basement but my son allows me to stroll inside the house. The only thing that keeps me going are the leters in raille that my wife sends me. she should now be a widow but my son does not want her to know of my death.

How badly I wanted back my eyesight just to see a glimpse of her; her wrinkled face the way she twiched her nose while frowning. ut she didn't want to meet me anymore. so I decided that dying would bring back my vision and that I could see her in the aferlife. ut litle did i know that one's life is not enough a bargain for a beloved's sight. So here i lay on the arm-chair reading leters in raille that my dutful son writes for me, pretending to be his mother that he had killed.

Dying certainly hasn't not brought my eyesight back but I can stll hear as good as before. I can hear my son asking to be forgiven standing in front of a photograph that look like his mother: my beloved. I can hear him cry as he burned old leters in the freplace. the crackling of the wood almost sounded like the shatering of my heart into smithereens.



CONSCIOUSNESS AND SCIENTIFIC SEARCH

ife, Mind and Consciousness are the most curious topics of philosophy and science in the domain of human knowledge for many centuries. Ancient Indian and many other philosophers believe strongly that the 'Life and Mind' are the manifestation of the 'Supreme Universal Consciousness' called 'God'. The most fundamental question asked is that 'where it exists and how it can be established?' The answer is given by ancient Indian and many other philosophers that the supreme consciousness is completely different from matter. It exists everywhere, non physical, has no boundary and eternal. Consciousness is the state of being aware of external objects and something within oneself. Living and non livings both have consciousness but of different levels and of different states. Human beings are the creatures having highest level of consciousness among others. Philosophers and distinguish scientists believe that human beings have mind which is distinct from brain. Brain is a highly complex physical object exists on a body which has been studied to a great extent till now. The brain functions are determined by various complex chemical and biological processes governed by scientific laws based on the various signals received by sense organs. Signals are processed, analyzed, computed and stored in brain for further use. Based on the research findings of the mechanisms of brain, some remarkable achievements are obtained in the direction of 'Artificial Intelligence'.

But, in spite of having same sense organs and same brain functions why human beings are not same or behaving differently? What are emotional qualities and feelings like joy, sorrow, guilty, pain, love etc.? Are these the different states of mind and what controls the mind? Scientists are continuously trying to find these answers but they are not in a position to give full proof answer either qualitatively or quantitatively. Theoretical physicists are trying to explain it on the basis of rules of Quantum Mechanics and a new theory called 'Consciousness based Quantum Mechanics' has been developed. Hope in future theoretical physicists would be able to explain the nature of 'Supreme Consciousness' at least qualitatively.

~~Monoranjan Kakoti. Prof. of Physics Depertment

IN YOUR EYES

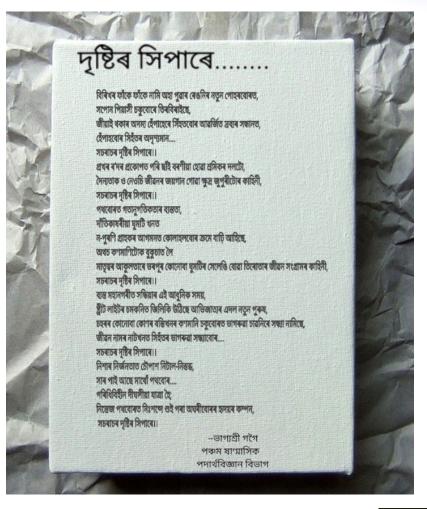
Standing in the crowd Where the spotlight fnds you. Everybody sees as you pretend to be ut only I can see you inside I may not read your thoughts, ut I can read your eyes. You can't hide those emotons, I can see them in your eyes. ehind that breathtaking smile, I can see those heartbreaking tears I can see those sadness You say you don't care. You try to ignore them ut your eyes turn from brown to amber When you lie. They sparkle in the li ut in the dark I can see the true colour of your heart. You say you don't have feelings, Then what are those feelings in your eyes? You are trying so hard to hide them, ut i can stll fnd your hiding place. I will be there to aid you 'I will be there to share your grief You may try to stop me You may try to hide your soul ut all your eforts go in vain because I can see them in your eyes Where those feelings are buried deep inside.

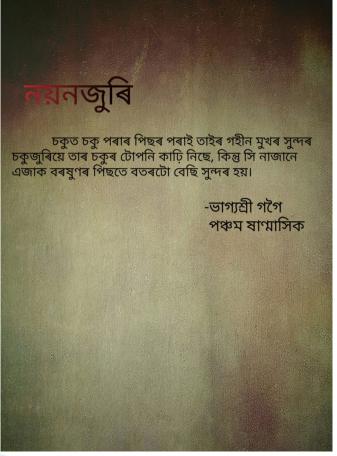
-Zafreen Akhter Ahmed

EYES

Such beautiful eyes I tell myself not to look When you walk on by But I take a peek Just to remind myself why Every time you turn the corner I will be there walking ooking into those beautiful eyes Everytime you leave the house will be on the other side of the street I am your shadow Even when it is dark You are all alone now Walking down an empty road Such beautiful eyes Even when death is insight Such beautiful eyes Even when life is no longer inside I walk down A busy street Looking for another pair Of beautiful eyes.

> ~Atiqul Mojumder 1st Semester





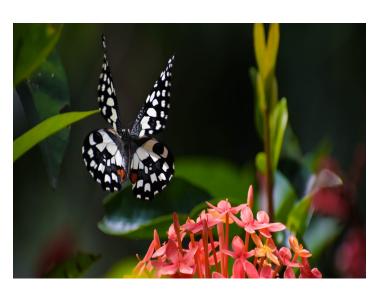
RECENT TEACHER ACHIEVEMENTS:

- 1. During this period a number of short stories ttted 'Prajanma', 'Arum ke-kto Amir' and 'Purnamidam', penned by Mr. Akashdipta Thakur, Assistant Professor, Department of Physics, were published in Gariyoshi, one of the most reputed Assamese magazines. Furthermore two other short stories of Mr. Thakur, ttted 'Sarbari' and 'Dokani', were published in the special issue of the prestgious magazine 'Basundhara'.
- 2. During this period Mr. Akashdipta Thakur, Assistant Professor, Department of Physics, composed a targe number of poems ttted 'chirantan (pubtished in Niyomiya Barta 'Sukanya' Rongati bihu bisesh'), 'utsav'(pubtished in Sadin Rongati Bihu Atochani), 'Bhinnasuri Tinita stabak'(pubtished in Dainik Janambhumi Rongati Bihu Atochani), 'Bamunar bari'(pubtished in Prantk), 'jatra'(pubtished in Dainik Janambhumi), 'tejor dharma' (pubtished in 'Jatra' 3 Monthty Kabya patrika).
- 3. Mr. Akashdipta Thakur, Assistant Professor, Department of Physics, wrote two novets 'Upakut' and 'Betiphutar rang' which are being published seriatty in Swarnatipi and Mouchaq chitd magazine, respectivety.
- 4. One act ptay ttted 'Rasamrit' writen by Mr. Akashdipta Thakur, Assistant Professor, Department of Physics, got published in Swarnatipi and another one act ptay ttted 'Amiya Madhuri Ras' has been performed by the poputar drama group 'Nepathya' and partcipated in severat one act ptay compettons (att Assam basis) hetd in diferent ptaces of Assam; got variety of prizes and poputarity.
- 5. Dr. Ankur Gogoi, Assistant Professor, Department of Physics compteted his postdoctorat research work (period: 18th May, 2016 to 23rd March, 2018) in the fetds of cutng edge devetopments of nontinear optcat microscopy and endoscopy in the Institute of Biophotonics, Natonat Yang-Ming University, Taipei, Taiwan under the supervision of Prof. Fu-Jen Kao.
- 6. Dr. Ankur Gogoi, Assistant Professor, Department of Physics co-authored the research paper ttted "Cooherent Narrow-Band Liight Source for Miniature Eindoscopesu pubtished in the prestgious journat "CIEiEiEi Journat of Setected Topics in Quantum Eitectronics (Votume 25, Issue 1, 7100707, 2018)u.
- 7. Dr. Ankur Gogoi, Assistant Professor, Department of Physics atended The 17th Eitectromagnetc and Liight Scatering oonference organized by Natonat Aeronautcs and Space Administraton (NASA) and Texas A&M University at oottege Staton, TX, USA during 4-9 March 2018. Dr. Gogoi presented two research papers ttted "CSpectratty and angte resotved tight scatering propertes of graphite and expanded graphite partctesu and "CBiotogicat tssue quatity assessment by using tight scatering goniometry and obtique incidence reflectometryu in the conference.
- 8. Dr. Ankur Gogoi, Assistant Professor, Department of Physics atended the Annuat Meetng of the Physics Society of the Repubtic of ohina (Taiwan) organized by Natonat Taiwan University, Taipei, Taiwan during 24-26 January, 2018 and presented a research paper ttted "CLiong working distance tme resotved pump-probe (stmutated emission) fluorescence anisotropy imagingu. Activities oraanide by the erartment:
- 9 The Physics Society of Jagannath Barooah oottege, in cottaboraton with the Department of Physics, organized the 3rd tatk of the 'Fronters in Physics Liecture Series' on 19th Aprit, 2018. The tecture was detivered by Dr. Debajeet Bora, Assistant Professor, oentre for Nano and Materiat Sciences (oNMS), Jain University, Bangatore, on the topic "Use of synchrotron X-ray for semiconductor etectronic structure study".



Dr. Ankur Gogoi was awarded as "Best Participant" in the 87'th Orientation programme held from 2'nd july,2018 to 28'th july,2018 in the UGC-Human Resource Developement Center,Osmania University, Telangana

PHOTO GALLERY

















Bhagyashree Gogoi 5th Semester



INTER-DEPARTMENT WALL MAGAZINE COMPETITION, 2017
Organised by
Students' Literary Club Section, JBCSU 2018-17

Certificate of Excellence

The west correctly that Chargepathree gages.

Of Physics Department of y. B. College has Secured 5xt/5xd/3xd position under the category.

Assocrate policy.

On the inter-Department wall

Magazine Competition, 2017 organised by Students' Esterary Club Section of 38CSU, 2016-17.

We work for for success in life

15 Daniel Barriel Aglander Branch Protestion Protestion 18 Colleges Jorket 1900

Haster Advesser Teacher Advesser 5.1 Club Section-JECEU

Medicine Manufacture (CO) (CO) (CO)

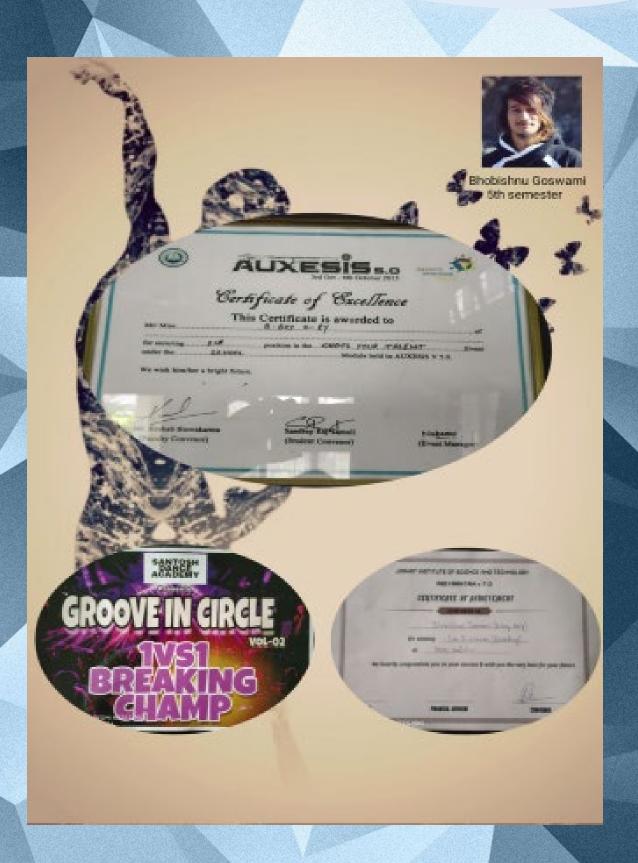
K - On NAME Name of China Chin Decretary (BCSU













MONOSWINI CHAKARAVARTY

COLLEGE WEEK

- Single Table -Tennis competition---2nd Prize
- Double Table -Tennis competition---2nd Prize

ALL ASSAM SWIMMING COMPETITION

- 50m Butterfly---3rd
- 50 m Freestyle--3rd

URBASHI BORA

- Creative Dance, Youth Festival, 2017---2nd Prize (Solo Dance)
- All assam dance competition at amecher theatre society,2017-1st
- All assam creative dance competition organised by Deuka,2018-9th position

BHARGAV KHOUND

- 1st best english handwriting(wall magazine competition,2018)
- 2nd best photographer at Jorhat District Photographers Association, 2018

TANIA MONJARI SONOWAL

Assamese article(wall magazine,3rd)

PARTHA SARATHI GOGOI

• English Article(wall magazine,2nd)

FACULTY ADVISORY BOARD



Dr. Ranjit Sharma,(HOD) Chief Advisor



Monuranjan Kakoti Member,Advisory Board



Akashdipta Thakur Member,Advisory Board



Dr. Jibon Saikia Member,Advisory Board



Pranjal Bora Member,Advisory Board



Dr. Ankur Gogoi Member,Advisory Board



Jayur Tisso Member,Advisory Board





