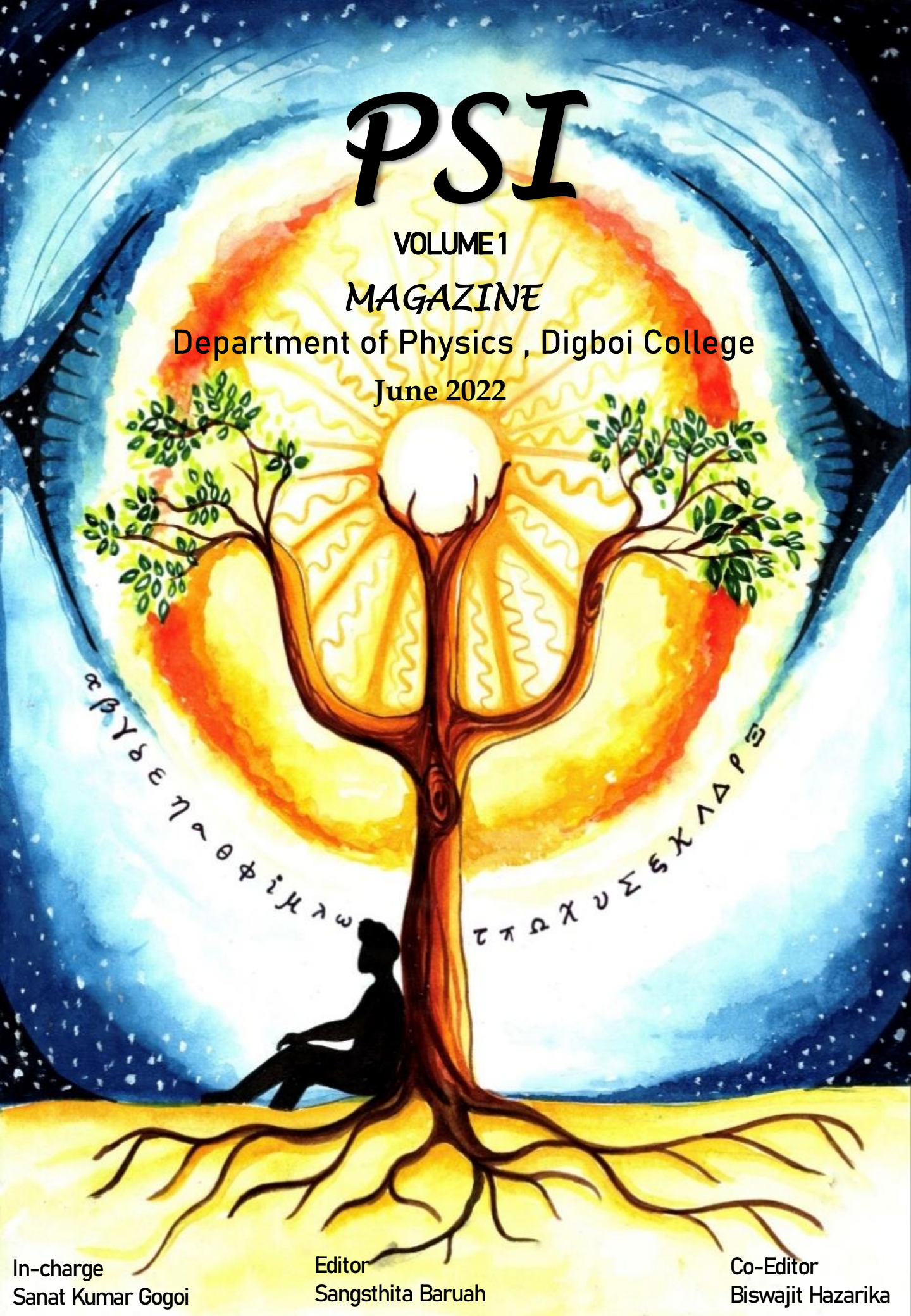
PSI

VOLUME 1

MAGAZINE

Department of Physics , Digboi College

June 2022



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Message from the Principal

It gives me immense happiness to know that students of M.Sc. Physics are going to publish an E-Magazine.

I thank all those involved in this endeavor.

The member of Physics department and its students have a symbiotic relationship – of mutual giving and nurturing. Just as the department needs sincere young minds that will walk through the doors of the lab, the students also need the college as a whole to polish them into bright citizens of tomorrow!

Let our relationship go deeper into the soil of humanism, tolerance and acceptance.

Be the person who breaks the cycle.

God bless you all.

18/5/2022

Principal
Digboi College, Digboi

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Message from Vice Principal

It gives me immense pleasure to know that the students of Physics Department of Digboi College are going to publish an E-Magazine entitled "**PSI**" in the month of June,2022. This Magazine will definitely provide an E-platform to all students to expose their creativity and carry informative and stimulating materials for all science lovers.

I would like to convey my best wishes to all members of editorial board of "**PSI**", students, teachers and HOD of Physics for this great endeavour.

20.05.2022

Date: 20th May, 2022

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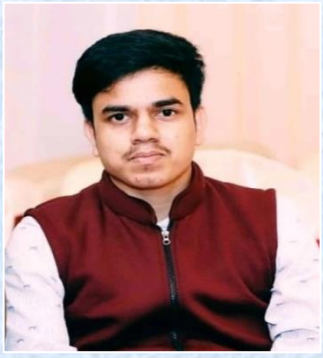

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Thought behind the name *PSI*

Dr. Deep Kumar Kuri
Assistant Professor

How the universe works has always been a fascinating tale for humans. From the elementary particles to the formation of Galaxies, we have always been eager to know the governing laws of universe. Our five human senses connect us with nature. We receive information from our surroundings by our touch, sight, hearing, smell and taste. Using these senses, we can study matter and its behavior through space and time which helps us in gaining knowledge about how the universe behaves. But is only having knowledge sufficient? In order to create, we need imagination too. In 1929, Einstein in a newspaper interview with the writer George Sylvester Viereck said: "I *am enough of an artist to draw freely on my imagination, which I think is more important than knowledge. Knowledge is limited. Imagination encircles the world."*The name PSI (Ψ) symbolizes PHYSICS, SENSE and IMAGINATION. Be it a wave or a particle, the concept has always started from imagination. This departmental magazine is a small step towards igniting the spirit of imagination among ourselves.

In-charge's Desk

It is an immense pleasure for me to work with the students in publishing this magazine. The students are very creative and have vast potential to surpass the world with their talented minds. The Faculties of the department were very helpful and inspiring. They always come up with new and robust ideas to overcome every problem that the students face. The idea that led to the publication of this magazine was initiated in an informal tea session. Creation of a more friendly environment and the freedom to express ones ideas has been the core motive of this magazine. The editor and the designing team have put their best to create this masterpiece. I wish the best to all and looking forward to be a member of such creative team in future.

Sanat Kumar Gogoi
In-Charge

Editor's Desk

"When learning is purposeful, creativity blossoms.
When creativity blossoms, thinking emanates.
When thinking emanates, knowledge is fully lit.
When knowledge is lit, economy flourishes."
—Dr A.P.J. Abdul Kalam

Imagination and creativity form an important part of the foundation of our knowledge. An idea that appears unclear at first eventually flourishes into something beautiful. Even in the field of science, it is imagination that gives impetus to the curious minds of researchers to combine ideas and arrive at the conscious representation of the well-formed explanations and observations. It is also known that any successful invention or creative endeavor has its foundations rooted within reality and must satisfy the laws of the world it exists in. Therefore, scientific study ensures that our creative endeavors are anchored within the laws of nature, giving the endeavors a higher probability of success.

This first issue of *PSI* features creative, inspiring and resourceful insights comprising of articles, poems and artworks. It is an attempt to reflect the particularity of the Department of Physics as well as to showcase the activities and accomplishments of the students over the recent period. This is my first time as an editor and I am grateful to be a part of this initiative.

I would like to thank our HOD Dr. Rashmi Patowary Ma'am for giving us this opportunity as well as our faculty members for their constant support and guidance. I would also like to offer my special thanks to Sanat Kumar Gogoi Sir for encouraging us to bring out this magazine. Furthermore, I would like to thank my co-editor Biwajit Hazarika as well as the incredibly talented creative team members Gayatri Phukan(Design and Writing) and Kunal Kaustav Nath(cover design) whose efforts and contributions are certainly invaluable. Lastly, I hope that everyone will whole heartedly support this magazine and send their valuable feedbacks so that we can continue to learn and improve our work in the upcoming issues.

Sangsthita Baruah
Editor

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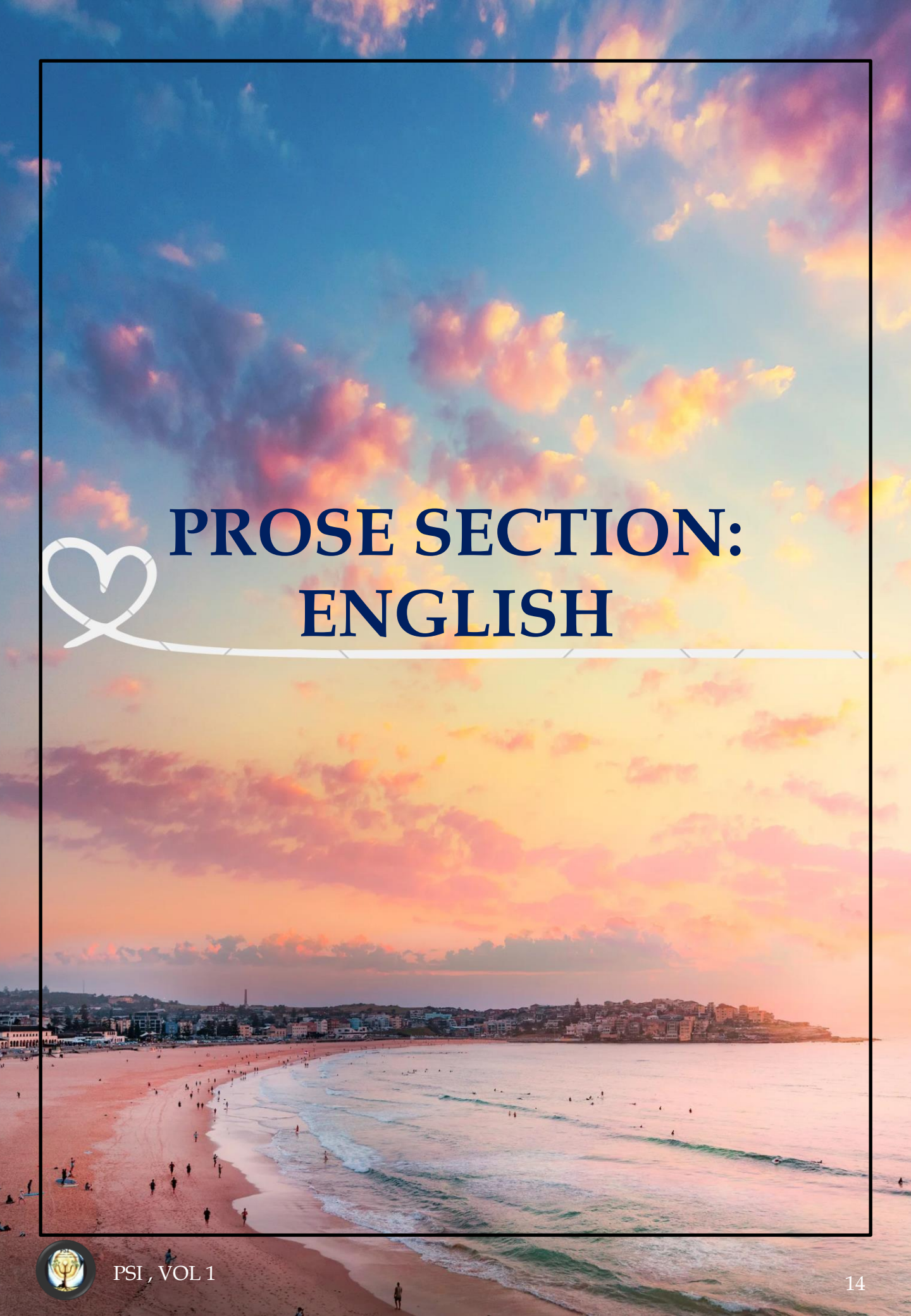


PROSE SECTION: ENGLISH

REMINISCENCES

Dr. Rashmi Patowary
Head of The Department

Since the day the idea of bringing out PSI, the first ever online magazine from the Department of Physics was conceived by the M.Sc. 4th semester students, I had been requested to pen down a few lines for it. But being perpetually pressed for time- perhaps due to my own lack of time management-I have been procrastinating. But I know with not even 24 hours for the scheduled inauguration of PSI, I could not avoid this; in fact, I did not want to avoid this.

So here I am Nibbling at my pen and going down memory lane.

Year: 1993, Date: 1st August:

As a young lady freshly passed out from Gauhati University I walked a bit hesitantly down a long corridor leading to the then unfamiliar Department of Physics, Digboi College. It was my 1st day as an Assistant Professor at Digboi College. I reported to the Head of the Department, Mr. Deepak Deb, a dynamic personality .He said -"Well our 1st batch of Major is in the final year. You have to teach them Quantum Mechanics. And Mathematical Physics to the 2nd year major students... And classical mechanics too..."

And the journey began. I was in a job I have always wanted to be in; in a place I was destined to be for the next 30 years.

Slowly the number of students increased and so did our confidence. In 1994 we had our 1st honours Graduate: Baburam Sharma. (He is presently a faculty at Tribhuvan University Nepal.) The year in 1999 called for celebration: Our student Jasmine Ahmed made us proud by securing 1st class 10th position. After that there was no waiting. We have continued the traditionof rank holders till date. I must acknowledge the efforts of my senior colleagues in creating a friendly learning atmosphere in this department.

In 2016 exactly 25 years after commencement of major courses in 1991, with the untiring efforts of our dynamic Principal Dr. Dip Saikia, Master's Degree in Physics under Dibrugarh university was introduced in our department. The pressure of teaching from the Higher Secondary to the M.Sc. classes seemed unsurmountable; but challenges are always welcome and young enthusiastic faces of students from all over Assam inspires us to carry forward the Post graduate course.

In 2017 our department acquired the DBT STAR College status which was another feather in the cap. The associated fund has helped us in organizing activities that creates a difference. To name just a few..an *IUCAA workshop, Robotics workshop, Antariksh workshop* on Telescope Handling and Night Sky watching , *Inter College Oral Presentation Competition*, Meaningful extension activities. We have procured a six-inch Cassegranian telescope with a view to forming an astronomy club. The department was brimming with activities from 2018-2019 and were

determined to do much more....But then came the pandemic and the lockdown.. in fact, two lockdowns. With the whole world coming to a standstill, we were no exception. As we struggled to make online teaching effective, students started giving online presentations. When holding programs became a far cry: we organized the National level presentation competition for the undergraduate level students which was critically acclaimed to be a unique competition by one and all.

Even after the lockdown, its effect has weighed heavy on the teaching learning process, pulling it below the desired level and we were feeling somewhat demotivated, very recently the outstanding achievement of our student Swapan Limbu (AIR:96 in Jam and AIR:48 rank JEST)has given a new leash of life to the department . We teachers are inspired to put in our best efforts; students have been found to motivated and an atmosphere of peer coaching has come up. It is a common sight nowadays in the department - a student teaching his or her classmates or a junior student.

Our students are our greatest asset and the Alumni WhatsApp group created during lockdown and consequently two online alumni meet has shown us a way to remain connected with our alumni. We now have a Face Book page and also a Research Gate page of the Department of Physics, Digboi College created and managed by our alumni. Another resource is Alumni talk delivered by eminent alumni in different fields of Physics.

The department and me: we have both grown together hand in hand. I have seen the under graduate section of our department growing from nowhere to a coveted position amongst colleges under the parent university and I have no doubt that in a few years we will see the Post Graduate section rising to unparalleled heights.I dream of a day when department will reach to greater heights : flourishing in academics as well as research and above all create good citizens .

The Post graduate students are the torch bearers of this department and by taking this noble initiative of bring out PSI they are reflecting their good will towards this department . We hope this venture will be carried forward in the coming years.

Many – Particle Physics Challenges, remedies and approximations

Sanat Kumar Gogoi
Assistant Professor

The night sky has been a source of inspiration for many scientists and creative thinkers. It is even more interesting to think that all those galaxies, stars, planets and living things are made up of elementary particles, yet they behave differently. There are 118 elements in the periodic table, and all of them are made of protons, electrons, and neutrons. Whenever we change the number of elementary particles inside an atom, it changes the interaction among themselves as well as the total energy of the atom. The change in interaction and total energy of the system leads to different behavior of the atom. For example, Chlorine (Cl) has 17 protons which is highly reactive, while Argon (Ar) has 18 protons and it is completely inert. Similarly, when we put atoms together, they also show different behavior from that of the constituent atoms. It is even more fascinating that different arrangement of the same atom (constituent block) leads to material with different behaviors. For example, graphite, diamond, graphene, and Fullerene are made up of carbon, yet they show different behaviors only because they are arranged differently. On the other hand, metallic, insulating, transparent, opaque, etc., properties of material can not be realized in a single molecule.
For a physicist, it is important to understand the reasons behind these observations and explain the same to the world.

To answer these question, we need to solve the Schrodinger's equation for the particular system. The solution of the Schrodinger's equation gives us the wave-function of the system, energy eigenvalues and all other physical observable that we want to compute. However, with the current development of mathematical methods and computational facilities we can only solve the Schrodinger's equation only for system with a few particles (around 5-6). To convince the reader here is an example: let us consider the Hydrogen (He) atom, which has only 1 electrons. The wavefunction ψ depends on all the co-ordinates the electron. Once we solve the Schrodinger equation we will have t store the wavefunction in the computer. For convenience we take 10 grid points in each spatial direction. Thus it will be (10 × 10 × 10) 1000 values in 3D. For the H atom which has 2 electrons so that will be 10^6 values. Similarly, if we want to solve for the Ne atom which has 10 electrons then it will be 10^30 values. Nowadays people use solid state drives (SSDs) to store data. One SSD having 10^12 byte in common language 1TB storage capacity weighs about 64 g. Even if we consider that 1 value re-quires 1 byte of memory (16 byte in practice with double precision) then we will need around10^29 SSDs which weighs more than 100 times the mass of the Earth.

But the systems that we want to solve (a solid system or a fluid system) consists atoms/molecules of order 10^23. Hence we need to think this problem from a different point of view and it is quite remarkable that with clever design of the problem we can solve the modified version of the Schrodinger's equation for millions of atoms.

One of the idea that broke this bottleneck by introducing density as the primary interest rather than calculating the wave-function of the system. It turns out that we can express the total energy of the system as a function of the density of particle in the system. There are two theorems known as Hohenberg - Kohn theorem which says that (i) For any system of interacting particles in an external potential the ground state particle density determines the potential uniquely, and (ii) For any external potential a universal functional for the energy in terms of density can be defined and the exact ground state energy of the system is the global minimum value of this functional. With the help of this two theorem one can modify the Schrodinger equation for a many particle system into an effective single particle Schrodinger equation. Once we have a single particle Schrodinger equation we can solve it and determine any physical quantity that we need.

QUANTUM PHYSICAL NATURE OF LOOKING AT THE WORLD

Swapan Limbu
BSc 6th Semester

The description of nature as told by Newton and his followers seemed to fail at certain situations. The first indications of this were during the late 1800s when physicists were trying to explain the thermal radiations. The classical theory predicted that the amount of light energy radiated would be infinite which is absurdly wrong. Quantum theory developed in an attempt to solve this problem. On their way physicists discovered that the dynamical variables which we thought were perfectly measurable were not and that these variables have a limit to which they can be measured. So, in this mechanics it was not possible to talk of definite momentum or definite position without talking into account the inherent uncertainty that accompanied them. The uncertainty relation is mathematically written as

$$\Delta x \Delta p \geq \frac{\hbar}{2} \quad \text{where} \quad \hbar = h/2\pi$$

Where physically it means that if you calculate the standard deviation of x and standard deviation p in any state a system can be then the product of the two can never be smaller than $\hbar/2$. This is not the only uncertainty followed in quantum mechanics. It turns out that every canonical pair of dynamical variables have similar form. For e.g,

$$\Delta E \Delta t \geq \frac{\hbar}{2}$$

So why we don't use quantum mechanics for solving the motion of earth around the sun?Because, the time scale time period of orbit which is of order 10^7 and energy is GmM/2R which is of order 10^{32} so there are no visual quantum effects for this system but consider an electron revolving around a nucleus. If you calculate the time period it comes out of order of 10^{-15} and energy is of order 10^{-19} so the product becomes of order 10^{-34} which starts to become comparable to the uncertainty threshold so that the quantum effects become extremely important in this system. That is why classical physics was not able to solve the hydrogen atom because classical mechanics is only applicable where the product of uncertainties is much larger than Planck's constant.

Mathematical Description of The New Mechanics

Without going into the history of mathematical methods we put forward the description. In quantum mechanics the state of a system is described by a ket vector $I\psi>$ in Hilbert space. Suppose you want to solve a quantum mechanical system you will first find or guess the Hamiltonian for the system and then find the base kets of the Hamiltonian. These base kets are orthogonal to each other in Hilbert space. Any general ket vector can then be represented by the linear combination of these base kets just like any vector in 3D can be represented as linear combination of 3 orthogonal vectors.

$I\psi> = \sum_i^n C_i I\phi_i>$, when there are n base kets for the system.These C_i's are the coefficients which give the amplitude for the

system to be in i'th state. Once the base kets are determined we can study the time evolution of $I\psi>$ by using the differential equation

$$i\hbar\frac{dC_i}{dt}=\sum_i H_{ij}C_j$$

Where H_{ij} is called the Hamiltonian matrix and $H_{ij}=\langle\phi_i|H|\phi_j\rangle$ is Hamiltonian representation in $I\phi>$ basis.

In this case the basis are discrete, when the basis are continuous we get for the above equation the Schrodinger equation. So the Schrodinger equation gives the time evolution of the general ket in continuous coordinate representation.

So for an example when we solve for the electron in hydrogen atom we need to know the base kets and the Hamiltonian. Once base kets are found the general ket time evolution is given by the differential equation given above.

But how to find the Hamiltonian matrix? And how many base kets would there be in this system. Base kets can be thought of as the degrees of freedom. But how to know its degrees of freedom. We do not know what the electrons are actually doing inside the hydrogen atom. We don't know if the electrons have any internal degrees of freedom. So how do we find the base kets. It turns out if we can guess the Hamiltonian matrix then its eigenfunctions gives us the base kets. But again how to guess the Hamiltonian matrix. And what would be the dimensions of the matrix. This is an impossible task to do in this framework. So we have to go into the coordinate representation where our ket vector becomes the so called 'wave function' of the system. The solution of the Schrodinger equation then gives the wave function for different states which are infinite set of states. We do this because the Hamiltonian matrix which was so hard to find in the matrix form is just the Kinetic + Electrostatic Potential Energy in coordinate representation

So the Hamiltonian matrix would be of infinite dimension and there would be infinite number of base kets for the hydrogen atom. So is this the end of physics of hydrogen atom? No. We did not take into account the fact that the nucleus can also have internal degrees of freedom and the fact that the nucleus and electron could be spinning. So there are more base states than we considered before and we need to find the Hamiltonian matrix for these base states as well if we want to know their physics. So it is a very complicated game but the rules are still simple and i.e. to find the Hamiltonian and base kets and use the time evolution differential equation to find the time evolution of coefficients C_i. But suppose when we want to study how EM waves of visible region effect the hydrogen atom then the energy of visible radiation is not so much that it can affect the nuclear base kets. It can only affect the electronic base kets. That is we can safely say for this particular phenomena of visible radiation affecting the hydrogen atom as a quantum mechanical system with only the electronic base kets.

Suppose now we have gamma rays affecting the hydrogen atom then the case is different. Now we have to take nuclear base kets and neglect the electronic base kets(energy is so high that it doesn't even feel that the electron is present around the nucleus) and find the Hamiltonian of nucleus and the EM radiation which will give all the information about the transitions and radiation phenomena.

The main goal of all quantum physicists is then to find or guess this Hamiltonian matrix. Once the matrix is found then the game becomes very easy.

So then be happy finding your Hamiltonian matrix.

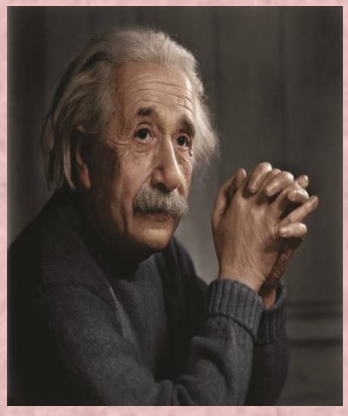
THE 10 BEST PHYSICISTS

Kangkana Gogoi
M.Sc 4th Sem

According to a poll of scientists conducted by Physics World magazine (December 1999),the top ten physicists in history are as follows:

1.Albert Einstein
2.Isaac Newton
3.James Clerk Maxwell
4.Niels Bohr
5.Werner Heisenberg
6.Galileo Galilei
7.Richard Feynman
8.Paul Dirac
9.Erwin Schrodinger
10..Ernest Rutherford

1. Albert Einstein

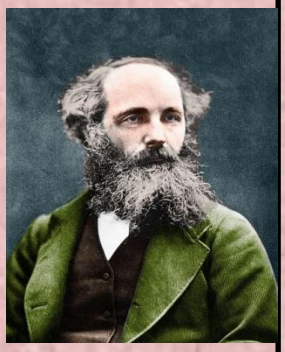


Three great theories define our physical knowledge of the universe: relativity, quantum mechanics and gravitation. The first is the handiwork of German-born Albert Einstein (1879-1955), who remains the physicist with the greatest reputation for originality of thought. His work showed that space and time are not immutable but are fluid and malleable. Einstein, who took US citizenship in 1940, also provided the world with its most famous equation, E=mc2, which demonstrates the equivalence of mass and energy. His name has become synonymous with the idea of genius and he died a celebrity. He was awarded the 1921 Nobel prize for physics.

2. Isaac Newton

Co-inventor of calculus, a major contributor to the science of optics and a gifted mathematician, Isaac Newton (1643-1727), who was born in Lincolnshire, outlined the laws of mechanics that now underpin vast swaths of classical physics. Most important of all,Newton outlined the principle of gravity, which explained how the planets revolve round the sun. During his life, he was showered with honours, including the presidency of the Royal Society. He is renowned as a supreme rationalist, though he actually wrote more about alchemy and religion, including a 300,000-word treatise that attempted to prove the pope was really the Antichrist and an “apocalyptic whore”.

3.James Clerk Maxwell



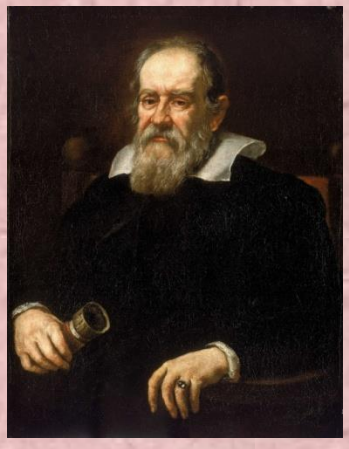
In contrast to Newton and Einstein, Edinburgh-born Maxwell (1831-79) is virtually unknown to the general public. Yet his contribution to physics was every bit as significant, particularly his discovery of the theory of electromagnetism. This showed that electricity, magnetism and light are all manifestations of the same phenomenon, the electromagnetic field. The development of radio, TV and radar were the direct consequences. Maxwell also carried out pioneering work in optics and colour vision. However, in his later years, his God-fearing Scottish upbringing brought him into dispute with the evolutionary thinking of Darwin and others and he wrote papers denouncing natural selection.

4.Niels Bohr

Born in Copenhagen, Bohr (1885-1962) developed the modern idea of an atom, which has a nucleus at the centre with electrons revolving round it. When electrons move from one energy level to another, they emit discrete quanta of energy. The work won Bohr a Nobel prize in 1922. For his achievements, Carlsberg brewery gave Bohr a special gift: a house with a pipeline connected to its brewery next door, thus providing him with free beer for life. In 1954, Bohr helped establish Cern, the European particle physics facility. In 1975, his son, Aage, won a Nobel for research on atomic nuclei.

5.Werner Heisenberg

Werner Heisenberg played a crucial role in the creation of quantum mechanics, developing the matrix mechanics formulation, establishing that the behavior of atomic sized particles is very different from larger objects, sometimes with bizarre consequences. Although Albert Einstein did not like it, Heisenberg showed that God continuously plays dice with the universe. Heisenberg's uncertainty principle established that particles have paired properties that cannot both be known precisely. For example, if you know a particle's position with high precision, you cannot know its momentum with high precision – there is always a level of uncertainty.



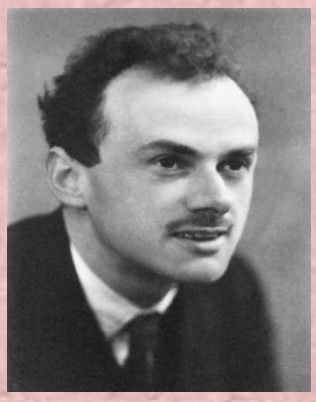
6.Galileo Galilei

Born in Pisa, Galileo (1564-1642) initially trained as a doctor. On hearing of the invention of the telescope in 1609, he built his own and turned it to the heavens, revealing the existence of sunspots and a pitted, mountainous surface on the moon: the heavens were not incorruptible. His studies also provided support for the idea that the Earth revolves round the sun. This got Galileo into considerable trouble with the Catholic church and he was forced to abandon that backing in 1633. His work on falling bodies also laid the groundwork for Newton's subsequent theories.

7/Richard Feynman

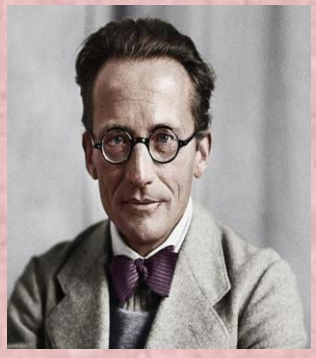
One of the 20th century's most influential and colourful physicists, Feynman (1918-88) played a key role in the development of quantum electrodynamics, the theory that describes how light and matter interact, earning him a Nobel prize in 1965. Feynman also contributed to the fields of quantum computing and nanotechnology and was a member of the Rogers Commission that lambasted Nasa over the destruction of space shuttle Challenger in 1986. He was a keen drummer, experimented with drugs and often worked on physics problems in topless bars because he said they helped him concentrate. Feynman died in 1988, aged 69.

8.Paul Dirac



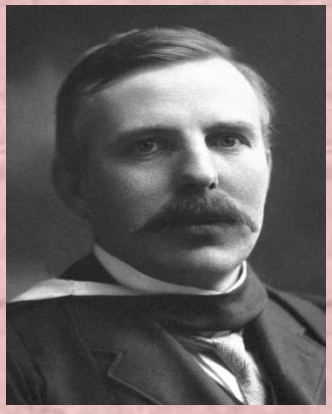
One of the most revered – and strangest – figures in physics. The son of a Swiss father and English mother, Dirac (1902-84) was born in Bristol. He predicted the existence of antimatter, created some of quantum mechanics' key equations and laid the foundations for today's micro-electronics industry. Dirac won a Nobel in 1933 but remained "an Edwardian geek", according to biographer Graham Farmelo. He turned down a knighthood because he didn't want people using his first name, while his daughter, Monica, never once remembered him laughing. "This balancing on the dizzying path between genius and madness is awful," Einstein said of him.

9.Erwin Schrodinger



Erwin Schrödinger established the wave mechanics formulation of quantum mechanics which, in contrast to Werner Heisenberg's matrix formulation, allowed a degree of visualization. Schrödinger portrayed electrons as waves, spread out rather than in any given location. He showed that his wave and Heisenberg's matrix formulations, although superficially different, were mathematically equivalent. In his later years, Schrödinger became unhappy with quantum mechanics and is famous for the Schrödinger's cat thought experiment, in which he attempted to show the absurdity of the Copenhagen interpretation of quantum mechanics.

10.Ernest Rutherford



New Zealand-born Rutherford (1871-1937) is considered one of the greatest of all experimental physicists. He discovered the idea of radioactive half-life and showed that radioactivity involved the transmutation of one chemical element to another. He was awarded a Nobel in 1908 "for his investigations into the disintegration of the elements". Rutherford later became director of the Cavendish Laboratory at Cambridge University where, under his leadership, the neutron was discovered by James Chadwick in 1932 and the first experiment to split the nucleus was carried out by John Cockcroft and Ernest Walton. The element rutherfordium was named after him in 1997.

HYDROGEN MOLECULE TURNED IN A QUANTUM SENSOR

Gayatri Devi Sonowal
M.Sc 4th Sem

Physicists at the University of California, have demonstrated the use of a hydrogen molecule as a quantum sensor in a terahertz laser-equipped scanning tunnelling microscope, a technique that can measure the chemical properties of materials at unprecedented time and spatial resolutions.`This novel technique can also be applied to the analysis of two-dimensional material which have the potential to play a role in advanced energy systems, electronics and quantum computers. The hydrogen molecule is a two level system because its orientation shifts between two positions . Through a laser pulse it can coax the system to go from a ground state to an excited state resulting in a superposition of two states. The hydrogen molecule became a part of the quantum microscope in the sense that wherever the microscope scanned, the hydrogen was there in between the tip and the sample.It makes an extremely sensitive probe , allowing to see the variations in angstrom.

As long as hydrogen can be adsorbed onto a material, one can use hydrogen as a sensor to characterize the material itself through observations of their electrostatic field distribution.

The ability to characterize materials at this level on hydrogen's quantum coherence can be of great use in science since their functioning often depends on surface imperfections .

WHY I AM PROUD OF MY DEAF SISTER

Saptashikha Chakraborty
M.Sc. 4th Sem

Ever since I was three I have grown up being a younger sister to a deaf sibling.

My parents found out that my sister Trisha was profoundly deaf just after she turned one, though it was deduced that she had been deaf since birth.

Around that time life was pretty difficult and due to recurrent meningitis resulting from an inner ear deformity, she was in and out of hospital for over a year.

As there was no possibility of my sister ever using hearing aids and cochlear implants, we all had to learn sign language, a skill that has given me a love of languages and an openness towards other cultures.

It also meant that growing up, my sister and I were incredibly close as it was through me that she had the possibility of mixing with hearing children of the same age.

Everywhere we would go together, I would have to listen to the people what they say and then translate to her as I could not listen and sign at the same time.

If we wanted to go to the cinema we had to go to a subtitled screening . Nonetheless she would always help me learn and improve on my sign language and be there as a shoulder to cry on whenever necessary.

School was a place where she could flourish and start becoming such an independent spirit.

My parents decided not to do her schooling from any deaf school but a totally normal school where all her classmates were hearing students. She appeared her 10th from state board and she secured 1st division with letter marks in 2 of her subjects. This was the first moment when everyone in our family cried , not because we are sad but because she made us so proud . After that she did her higher secondary and bachelors in science in computer science from Cotton university , one of the best known in the state. And even here she graduated with flying colors. And lastly of course she did her masters from Gauhati university where she was 1st class 4th from her department.

And now recently she appeared for a state government exam, where she has been selected as junior administrative assistant in Assam Secretariat .

Dear readers, you might be thinking why am I sharing her academic transcripts with you all, this is because she is 100% deaf. She is not like us. She didn't even go to deaf school . She stayed among all hearing people and hence because of all her own hardwork she gained it. And I feel proud to share this..

Not many people understand that she has no hearing at all and thus they treat her with indifference and ignorance. Only a handful of my friends growing up could communicate with her and include her in our activities.

I always hated it when she was excluded as it made her upset and frustrated. This still happen now as apart from when she went to school and to college , she is surrounded by hearing people all the time, and my parents and I have to fight to get some recognition and even tolerance from those around us.

This even extends to our wider family because apart from the four of us, the rest of the family doesn't properly sign or even attempt to communicate without having to go via myself .

As both my sister and I find it hugely frustrating and infuriating, we always end up having our own conversations and no longer enjoy family gatherings as we feel isolated.

It was fine when we were little because we could run off and play with our toys, but now that we are older, people always think that we are being extremely rude if we leave and do our own thing.

Be that as it may, this does not stop my sister being proud of who she is, proud that she has fought through life's problems and continues to be strong.

Forced to be very independent, she doesn't allow ignorant people to get her down or stop her from living her life to the fullest. She is an inspiration to me and to others she meets, and she has opened doors to career paths for me that without her, would have forever remained locked.

She is who she is and I am proud to call her my sister.

A KNOWN MYSTERY : BLACK HOLES

Debangshee Paul
B.Sc. 4th Sem

Black holes are some of the most and fascinating objects in space. A black hole is a region of space time where gravity is so strong that no particles even electromagnetic radiation such as light can escape from it. The existence of a black hole was first predicted by Albert Einstein in 1916, but the term 'black hole' was coined in 1967 by American astronomer John Wheeler. Our home galaxy, the milky way may harbor some 100 billion black holes. Black holes are points in space that are so dense that they create gravity sinks. There are four types of black holes: stellar, intermediate, supermassive and miniature. In this article I will only talk about stellar and supermassive black holes.

Stellar death is the most common way for the formation of a black hole. By saying stellar death we mean the death of stars which leads to many nuclear processes. Stars are very giant astronomical objects comprising of a luminous plasma. But the largest of these fiery bodies, those at least 10-20 times massive as our sun will become stellar-mass black holes.

After the formation of a black hole its growth depends on absorbing mass from its surroundings. Supermassive black holes are million times the mass of the sun. They are formed by absorbing other stars and merging with other black holes.

The modern version of a black hole was proposed by German physicist Karl Schwarzschild in 1915. It was realized that it was possible for mass to be squeezed into an infinitely small point . This would make space time around it bend so that nothing-not even massless photons of light would escape its curvature. The core of a black hole is called singularity. Once a black hole achieves a stable condition after formation, it will have only three independent properties: mass, electrical charge and angular momentum, otherwise it is featureless. Black holes have this incredible ability to literally stretch us into a long spaghetti like strand. Appropriately this phenomenon is called spaghettification.

The singularity at the center of the black hole breaks down our standard laws of physics and could in theory, change these conditions and spawn a new slightly altered universe. And interestingly this theory behind the black holes spawning a new universe is an active field of research today.

MY FASCINATION WITH THE NIGHT SKY

Sangsthita Baruah
M.Sc 4th Sem

From my childhood, I had a profound fascination to observe the night sky. I would gaze up till my neck hurt just to find that one shooting star. Then my dad would tease me saying, "Look there it was, you missed it."

When I was 8 years old, I had my first ever visit to a planetarium. I was in awe thinking how could something be so enthralling. It was also one of the reasons that caused my interest in science and ultimately got me into physics. For days after that visit, I would daydream about the galaxies that I saw, the planets, the constellations.

Even while growing up, this interest of mine had its impact. Every time I heard about some celestial event in the news, I checked to see if it was visible from our region . Although in most cases it was not. I would envy the countries that were able to witness most of the comets, meteor showers, planetary transits. But I still had one thing I could do ; that was to look up constellations. The first ever constellation that had my eyes was The Orion, when I was 10 years old. In due course I was able to locate a lot of them - Sagittarius, Cassiopeia, the big dipper, Hydra, Leo and many more . Other than that, I was also once able to focus Mars into my low-resolution telescope.

Recently I found an app called *Stellarium* which shows the accurate location of the constellations and even the names of the visible satellites at a particular moment .This is something I would recommend to my fellow stargazers. At the same time, I believe that searching for constellations on one's own is significantly more fulfilling. It is possible to utilize the app as a guide.

Back in December 2020, I was lucky enough to witness The Geminid meteor shower. The best viewing was typically around 2 am. So, I had to set an alarm as I didn't really stay up late. My dad and I went to the roof of our house and watched the sky.After a while, we realized that when we constantly focused on a particular area, the showers were visible.Of course they were lightly visiblebut this probably was one of the best moments of my life. As I had read somewhere, finding meteors is like fishing, you go and sometimes you catch a big one!

When looking up at the night sky, one may truly appreciate their smallness and insignificance in the vastness of the universe .As goes a famous quote by Bill Watterson-

"If people looked at stars each night, they'd live a lot differently.When you look into infinity, you realize that there are more important things than what people do all day"

ELECTRIC CURRENT :- THE FLOW OF CHARGE

Ranjeet Newpane
M.Sc 4th Sem

Our ancestors relied on fire for light, warmth and cooking. Today at the flick of a switch, turn of a knob or the push of a button we have instant power. This is possible because of the electric current. Do you know what is current? In this article, let us learn and find how electric current has revolutionised modern day living. It is one of the important discoveries that helped us transform our way of living. From the time we wake up till the time we sleep at night, our life is dependent on electricity. From the basic bread toaster, baking oven to the commonly used television all require electric current to operate. The most common device, mobile phones use the electric current to charge the battery for the operation. Besides playing a major part at home, electricity also plays an important role in industries, transportation and communication.In this article I have focused on some basics of electric current.

WHAT ELECTRICITY IS?

It is obviously the flow of charge, basically electrons for conductors and electrons and holes for semiconductors. In an electrolyte the charge carriers are ions, while in plasma, an ionized gas, they are ions and electrons. The SI unit of electric current is the ampere, or amp, which is the flow of electric charge across a surface at the rate of one coulomb per second. The ampere (symbol: A) is an SI base unit of Electric current which is measured using a device called an ammeter. Electric currents create magnetic field, which are used in motors, generators, inductors, and transformers. In ordinary conductors, they cause joule heating, which creates incandescence light bulb. Time-varying currents emit electromagnetic waves, which are used in telecommunication to broadcast information.

TWO TYPES OF ELECTRIC CURRENT

In ALTERNATING CURRENT (AC) systems, the movement of electric charge periodically reverses direction. AC is the form of electric power most commonly delivered to businesses and residences. The usual waveform of an AC power circuit is a sine wave, though certain applications use alternative waveforms, such as triangular or square waves. Audio and radio signals carried on electrical wires arealso examples of alternating current . An important goal in these applications is recovery of information encoded (or modulated) onto the AC signal.

In contrast, DIRECT CURRENT(DC) refers to a system in which the movement of electric charge in only one direction (sometimes called unidirectional flow). Direct current is produced by sources such as batteries, thermocouples, solar cells, and commutator -type electric machines of the dynamo type. Alternating current can also be converted to direct current through use of a rectifier. Direct current may flow in a conductor such as a wire, but can also flow through semiconductors, insulators, or even through a vacuum as in electron or ion beam. An old name for direct current was galvanic current.

UNIQUE CONDUCTION MECHANISMS

1)IN GASES AND PLASMA

In air and other ordinary gases below the breakdown field, the dominant source of electrical conduction is via relatively few mobile ions produced by radioactive gases, ultraviolet light, or cosmic rays. Since the electrical conductivity is low, gases are dielectrics or insulators. However, once the applied electric field approaches the breakdown value, free electrons become sufficiently accelerated by the electric field to create additional free electrons by colliding, and ionizing, neutral gas atoms or molecules in a process called avalanche breakdown. The breakdown process forms a plasma that contains enough mobile electrons and positive ions to make it an electrical conductor. In the process, it forms a light emitting conductive path, such as a spark, arc or lightening. Plasma is the state of matter where some of the electrons in a gas are stripped or "ionized" from their molecules or atoms. A plasma can be formed by high temperature, or by application of a high electric or alternating magnetic field as noted above. Due to their lower mass, the electrons in a plasma accelerate more quickly in response to an electric field than the heavier positive ions, and hence carry the bulk of the current. The free ions recombine to create new chemical compounds (for example, breaking atmospheric oxygen into single oxygen [O2 → 2O], which then recombine creating ozone [O3])

2)VACCUM

Since a "perfect vacuum "contains no charged particles, it normally behaves as a perfect insulator. However, metal electrode surfaces can cause a region of the vacuum to become conductive by injecting free electrons or ions through either field electron emission or thermionic emission. Thermionic emission occurs when the thermal energy exceeds the metal's work function, while electron emission occurs when the electric field at the surface of the metal is high enough to cause tunneling, which results in the ejection of free electrons from the metal into the vacuum. Externally heated electrodes are often used to generate an electron cloud as in the filament or indirectly heated cathode of vacuum tubes. Cold electrodes can also spontaneously produce electron clouds via thermionic emission when small incandescent regions (called cathode spots or anode spots) are formed.
These are incandescent regions of the electrode surface that are created by a localized high current.
These regions may be initiated by field emission electron, but are then sustained by localized thermionic emission once a vacuum arc forms.

These small electron-emitting regions can form quite rapidly, even explosively, on a metal surface subjected to a high electrical field. Vacuum tubes and sprytrons are some of the electronic switching and amplifying devices based on vacuum conductivity.

VARIATION OF RESISTANCE WITH LENGTH AND AREA OF CROSS SECTION

Resistance , R is directly proportional to length , L of the conductor and inversely proportional to area of cross section ,A of the conductor i.e $R \propto L$

$R \propto A$

Or $R \propto L/A$

Which proves that resistance will increase if we increase the length of the conductor and it will decrease if we increase the area of cross section of the conductor.

ant)

Some misconceptions are there that there will be increase in the value of resistance if we roll a wire although length and area of cross section are not changed. It is not true because no change in the the resistance of a conductor takes place until and unless we change it's area of cross section or length (while temperature should be const

AURORA

Deepjyoti Debnath
BSc 4th Sem

An aurora is a natural phenomenon which is characterized by a display of a natural-colored (green, red, yellow or white) light in the sky. It is a light show which is caused when electrically-charged particles from the sun collide with particles from gases such as oxygen and nitrogen present in the Earth's atmosphere.

Aurora is sometimes referred to as 'polar light'. It is predominantly seen in the regions of high altitudes like the Arctic and Antarctic. An aurora is caused by the streams of electrified particles (which are emitted by the sun) trapped in the magnetic field of the earth. It is produced when this magnetosphere is disturbed by the solar wind carrying the charged particles. Auroras are seen in latitudes of around 70 degrees. They generally occur in a band known as 'auroral zone'. The auroral zone is 3 to 6 degrees wide in latitude. It lies between 10 and 20 degrees from the geomagnetic poles. This is visible quite clearly during the night. Auroras can sometimes be seen at latitudes below the actual auroral zone. Auroras can appear in various forms like streamers, patches, arcs, scattered light, diffused light etc. The brightest and the most distinctive of all forms of auroras are the ones which are curtain-like in the shape of an arc, extending in the east-west direction. This natural light effect is known as 'aurora borealis' in northern altitudes, while the effect in the southern latitudes is known as 'aurora australis'. (Auroras that occur in Northern hemisphere are known as aurora borealis and auroras that take place in Southern hemisphere are known as aurora australis.) Aurora borealis is also known as 'Northern lights'. Similarly, aurora australis is also known as 'Southern lights'.

WHY DO MATHEMATICIANS AND PHYSICISTS ARGUE?

-Sanjay Thapa
M.Sc. 4th Sem

There has always been a debate in the science community since ages, on whether Mathematics is superior to Physics or Physics to Mathematics.

Both Physics and Mathematics were developed independently for different purposes and reasons. Mathematics is mainly focused on abstract ideas or topics such as quantity (number theory), structure (algebra), space (geometry). What mathematicians do, is they look for patterns and analyse if that pattern is connected to something deeper(they like to generalize the idea) and develop new ideas, concepts and theories using pure logic and mathematical reasoning. Unlike physics , mathematics is not always centered around physical meanings. Mathematicians may not do experiments to support their ideas rather they use proof as a support.

On the other hand, Physicists are focused on the study of the natural laws of the universe, from macroscopic to the microscopic level. Unlike Mathematicians, Physicists are more interested in the special cases rather than in the general cases. Also, Physicists do rigorous experiments and observation with combination to theories to support their ideas. This difference in ideas and goals sets a natural conflict between the two fields. Mathematicians say that Maths is the language of the universe and since Physics is the study of the universe itself, hence mathematics is the language of physics. Thus, Physics gives meaning to mathematics.

Some Mathematicians argue that physics is just applied mathematics. Yes, physics does include mathematics and we're not shy about it but we also do not hide behind it.

For instance, does the information always flow from mathematics to physics? No, its mutual. Information also flows from physics to mathematics. Physics gives inspiration or it acts as an impetus to mathematics with theoretical concepts such as general relativity and quantum field theory giving them reasons to develop new ideas and tools.

Many Mathematicians and Physicists are working together on various research programmes across the globe such as the quantum field theory which if could be understood properly or described in a mathematical way, would benefit both physics and mathematics. So, Physics and Mathematics are closely tied, they are like the two sides of a coin. Both complement each other and are equally important in their own ways.

THE CASE AGAINST HELIOCENTRISM

Richard Gogoi
B.Sc 6th Sem

The Sagnac experiment, proving the existence of ether, destroys the theory of relativity, which necessarily assumes that there is no ether. The Michelson/Gale experiment proved that thither passed over the earth once every 24 hours, but it did not prove whether it was the ether moving or the earth spinning.Airy's failure determined with scientific certainty that in fact it was the ether carrying the stars that was moving over the earth and that the earth was stationary. Dr. Neville Thomas Jones, Ph.D.explains that "George Airy proved that the world was stationary and the stars are moving." Because his experiment proved that the earth does not move, which was the opposite of the expected outcome, Air's experiment is commonly known as "Air's failure."

The Sun

"Regiments of figures are paraded with all the learned jargon for which science is famous, but one might as well look at the changing clouds in the sky and seek for certainty there, as to expect to get it from the propounders of modern astronomy. But is there no means of testing these everchanging never-stable speculations and bringing them to the scrutiny of the hard logic of fact? Indeed, there is. The distance of the sun can be measured with much precision, the same way as a tree or a house, or church steeple is measured, by plane triangulation. It is the principle on which a house is built, a table made or a man-of-war constructed … The sun is always somewhere between the tropics of Cancer and Capricorn, a distance admitted to be less than 3,000 miles; how then can the sun if it be so many thousand miles in diameter, squeeze itself into a space of about 3,000 miles only? But look at the distance, say the professors! We have already done that and not one of the wise men we have so often challenged, has ever attempted to refute the principle on which we measure the sun's distance … If the navigator neglects to apply the sun's semi diameter to his observation at sea, he is 16 nautical miles out in calculating the position his ship is in. A minute of arc on the sextant represents a nautical mile,and if the semi-diameter be 16 miles, the diameter is of course 32 miles. And as measured by the sextant, the sun's diameter is 32 minutes of arc, that is 32 nautical miles in diameter. Let him disprove this who can. If ever disproof is attempted, it will be a literary curiosity, well worth framing." -Thomas Winship, "Zetetic Cosmogony" (114-120) Eric Dollard (called a modern-day Tesla), says that the current Sun is losing power. He says the Sun burns no energy, actually burns nothing, and has no fusion, but is more a convertor of electromagnetic light. A giant Tesla lamp, so to speak. So, the Sun is not just a burning celestial body that's emanating heat like a camp fire, because if it were it would have been hotter on mountain peaks or at 20 miles' altitude, for example.

But that is not the case, it gets very cold as we go up to 100km. We know this for a fact. So then, the light from the Sun reacts with the dense atmosphere at ground level and it produces heat.

In interactions with matter, visible light primarily acts to elevate electrons to higher energy levels, thus we see that visible light

and gamma rays and microwaves are really the same things. They are all electromagnetic radiation; they just differ in their wavelengths.

Most of the electromagnetic radiation from the Sun is in the form of visible light. Light is made up of waves of different frequencies. These frequencies are interpreted by our brain as colors. Infrared waves and ultraviolet waves are two types of waves from the Sun that we cannot see. So because the atmosphere is so dense at ground levels the microwaves from the Sun generate heat by generating electron excitation in the air gases.

The same phenomenon happens also to living organisms. We all know the heating effect that Sunlight has on our skin. The denser an object is - the greater is the heating effect.

This type of heat transfer can be observed on Sunny days. Your face will feel warm when you are standing in the Sun. The Sunlight is absorbed by your face, and warms your face without warming the air around you at the same level. The energy from the Sun that is absorbed by your face is called radiant energy or radiation. Radiation is the transfer of this heat energy by electromagnetic waves. So, the light that comes from the Sun is complex and intelligently designed with many frequencies.

Self-Luminous Moon

NASA and modern astronomy maintain that the Moon is a solid, spherical, Earth-like habitation which man has actually flown to and set foot on. They claim the Moon is a non-luminescent planetoid which receives and reflects all its light from the Sun. The reality is, however, that the Moon is not a solid body, it is clearly circular, but not spherical, and not in any way an Earth-like planetoid which humans could set foot on. In fact, the Moon is largely transparent and completely self-luminescent, shining with its own unique light.he Sun’s lights golden, warm, drying,preservative and antiseptic, while The Moon’s light is silver, cool, damp, putrefying and septic.TheSun’s rays decrease the combustion of a bonfire, while the Moon’s rays increase combustion. Plant and animal substances exposed to sunlight quickly dry shrink, coagulate, and lose the tendency to decompose and putrefy; grapes and other fruits become solid, partially candied and preserved like raisins, dates, and prunes; animal flesh coagulates, loses its volatile gaseous constituents, becomes firm, dry, and slow to decay. When exposed to moonlight, however, plant and animal substances tend to show symptoms of putrefaction and decay.

In direct sun light thermometer will read higher than another thermometer placed in the shade, but in full, direct moonlight a thermometer will read lower than another placed in the shade. If the Sun’s light is collected in a large lens and thrown to a focus point it can create significant heat, while the Moon 'slight collected similarly creates no heat. In the "Lancet Medical Journal,” from March 14th, 1856, particulars are given of several experiments which proved the Moon's rays when concentrated can actually reduce the temperature upon a thermometer more than eight degrees.

“The sun's light, when concentrated bya number of planeor concave mirrors throwing the light to the same point; or by a large burninglens,producesa black ornon-luminous focus, inwhich the heat is so intense that metallic and alkaline substances arequickly fused;earthy and mineral compounds almost immediately vitrified; and all animal and vegetable structures in a few seconds decomposed, burned up and destroyed. The moon's light concentrated in the above manner produces a focus so brilliant and luminous that it is difficult to look upon it; yet there is no increase of temperature. In the focus of sunlight there is great heat but no light. In that of the moon's light there is great light but no heat.”-Dr.Samuel Rowbotham, “Zetetic Astronomy, Earth Not a Globe!”

T“Light which is reflected must necessarily be of the same character as that which causes the reflection, but the light of the Moon is altogether different from the light of the Sun, therefore the light of the Moon is not reflected from the Sun.The Sun'slightis red and hot, the Moon's pale and cold- the Sun's dries and preserves certain kinds of fish and fruit, such as cod and grapes, for the table, but the Moon's turns such to putrefaction- the sun's will often putout coal fire, while theMoon'swillcause ittoburn more brightly- the rays of the Sun, focused through a burning-glass, will set wood onfire,and even fuse metals,while the rays of the Moon, concentrated to the strongest power, do not exhibit the very slightest signs of heat.I have myselflongthoughtthatthe light of the Moon is Electric, but, be that as it may, even a Board School child can perceive that its light is totally unlike that of the Sun.”- David Ward law Scott, “Terra Firma” (151-2)

“There are three classes of people: those who see. Those who see when they are shown. Those who do not see.”
— **Leonardo da Vinci**

Gravitation

According to the heliocentric model, the force of gravity at the equator is perfectly balanced against the centrifugal force of the spinning earth. All persons and objects are supposedly perfectly balanced through gravity by their mass against the centrifugal force of the spinning earth to remain attached to theearthThe problem with the gravitational theory is that according to that theory, the gravitational attraction to the earth by all persons and objects remains the same at all places on the earth.That means that the gravitational force at the North Pole is the same as the gravitational force at the equator. That poses a very real problem if the earth is spinning as alleged. That is because the centrifugal force decreases every mile toward the north pole, where the centrifugal force is ultimately reduced to zero, because the North Pole is the axis of the supposedly spinning earth. On a globe, as you travel north or south of the equator the circumference parallel to the equator becomes less. Consequently, the speed of the earth’s spin at those more northern and southern latitudes from the equator would be slower than its speed of spinet the equator. For example, at the 45-degree north latitude, the earth's spin should be approximately 700 miles per hour. One hundred feet from the North Pole, the earth’s spin should be reduced to one quarter mile per hour (1,308 feet per hour). As the speed of the spin is reduced, so also is the correlative centrifugal force. What is the amount of decrease of the centrifugal force between the equator to one hundred feet of the North Pole? There would be a 4,000-fold reduction (1,000MPH vs. ¼ MPH) in centrifugal force from the equator to a point one hundred feet of the North Pole. That means, assuming (as is required by the theory of gravity) that the force of gravity remains constant over the entire surface of the earth, a 175-pound man at the equator would weigh 700,000 pounds if he traveled to within100 feet of the North Pole.378 Assuming the earth is spinning, the decrease in the centrifugal force as one approaches the North Pole, means that a person would be crushed by the force of gravity, before he ever reached the North Pole. The spinning earth and the mystical force of gravity are thus proven to be preposterous fictions. Some will point out that objects do in fact have different weights at the equator and the North Pole. However, the differences the reverse of what would be expected by the interaction between centrifugal force and the theory of gravity. Objects weight fraction off a percentage less at the North Pole than

at the equator. The reason has to do with the fact that there is more atmospheric pressure the further one travels towards the equator, which causes the objects at the equator to weigh slightly more**.**

There is no such thing as gravity; gravity is not necessary on a flat earth. It is density that keeps objects from floating off the surface of the earth. People and objects are heavier than the air and therefore do not float off the ground. There are some gasses, of course, that are lighter than air, and they float off the ground. Everyone has seen helium balloons float up in the air. Everyone understands that helium balloons are not some sort of anti-gravity devices; they float up in the air, because helium is lighter than air. Why do people not understand that apples fall from trees to the ground, not because of gravity, but because apples are denser than air? They believe in the mystical force of gravity, not because it has been proven true, but because they have been brainwashed into believing in it. Gravity does not exist. David Ward low Scott explains : Any object which is heavier than air and which is unsupported, has a natural tendency to fall by its own weight. Newton's famous apple at Wools Thorpe, or any other apple when ripe, loses hold of its stalk, and, being heavier than the airdrops as a matter of necessity, to the ground, totally irrespective of any attraction of the Earth. For, if such attraction existed, why does not the Earth attract the rising smoke which is not nearly so heavy as the apple? The answer is simple—because the smoke is lighter than the air, and, therefore, does not fall but ascends. Gravitation is only a subterfuge, employed by Newton in his attempt to prove that the Earth revolves round the Sun, and the quicker it is relegated to the tomb of all the Capulet's, the better will it be for all classes of society. He draped his idol with the tawdry tinsel of false science, knowing well how to beguile the thoughtless multitude, for, with a little alteration of Byron's famous lines, it is still true that “mortals, like moths, are often caught by glare. And folly wins success where Seraphs might despair.” Gravitation is a clever illustration of the art of hocus-pocus —heads I win, tails you lose; Newton won his fame, and the people lost their senses.

Flat Earth Map and Tree of Life at the Centre reaching up to the dome/firmament, Terminal A, George Bush Intercontinental Airport(IAH) ,Houston , Texas , US..
TRUTH IN PLAIN SIGHT

For sources and for further detailed description, regarding 1/Coriolis,2/Eclipses,3/North Star, 4/Mid Night Sun Phenomenon,5/Firmament/Dome, 6/Actual ground-based Satellite Systems,7/Real flight paths, practical navigation,8/The Antarctic360-degree Ice Wall,9/Stars and Planets etc.

Recommended readings are…

1/ 200 proofs Earth is not a spinning ball by Eric Dubai.
2/Zetetic Cosmogony by Thomas Win ship.
3/The Flat Earth Conspiracy by Eric Dubay.
4/Flat Earth Advanced by Mark Knight.
5/Who built the Moon by Christopher Knight and Alan Butlar.
6/The Greatest Lie on Earth by Edward Hendrie.
7/The Book of 528 by Dr.Leonard Horowitz.
8/Everything you need to know,but have never been told about by David Icke.
9/Becoming Supernatural by Dr.Joe Dispense.
10/The Biology of Belief by Dr.Bruce Lipton.

11/The Hidden Messages in Water by Dr. Masaru Emoto.
12/The Manual of Free Energy Devices and Systems by D.A. Kelly.

Links to Documentaries..

Doc1
https://youtu.be/U_bJYXS9p4A

Doc2
https://youtu.be/WffliCP2dU0

Doc3
https://youtu.be/3OfbwhU5PQk

ভগৱান...ভ = ভূমি, গ= গগণ(Akash/Aether),ৱা = ৱায়ু, ন =নীৰ
“There are two ways to be fooled. One is to believe what isn't true; the other is to refuse to believe what is true.”
— Soren Kierkegaard
“If the doors of perception were cleansed everything would appear to man as it is, Infinite. For man has closed himself up, till he sees all things thro' narrow chinks of his cavern.”
— William Blake
“You are one of the rare people who can separate your observation from your preconception. You see what is, where most people see what they expect.”
— John Steinbeck

FACTS ON PHYSICS

Gayatri Thapa
BSc 4th Sem

Water slows down light.
Each water molecule has individual surface tension, which distorts the image you see. This is why your face would look cartoonish behind a glass of water.

You can yell at your soup to warm it.
However, sound waves carry minimal energy, so the effect would not be noticeable. You're better off with a stove or a microwave.

Transparent objects are visible because they reflect light.
This is why we can still see glasses and ice

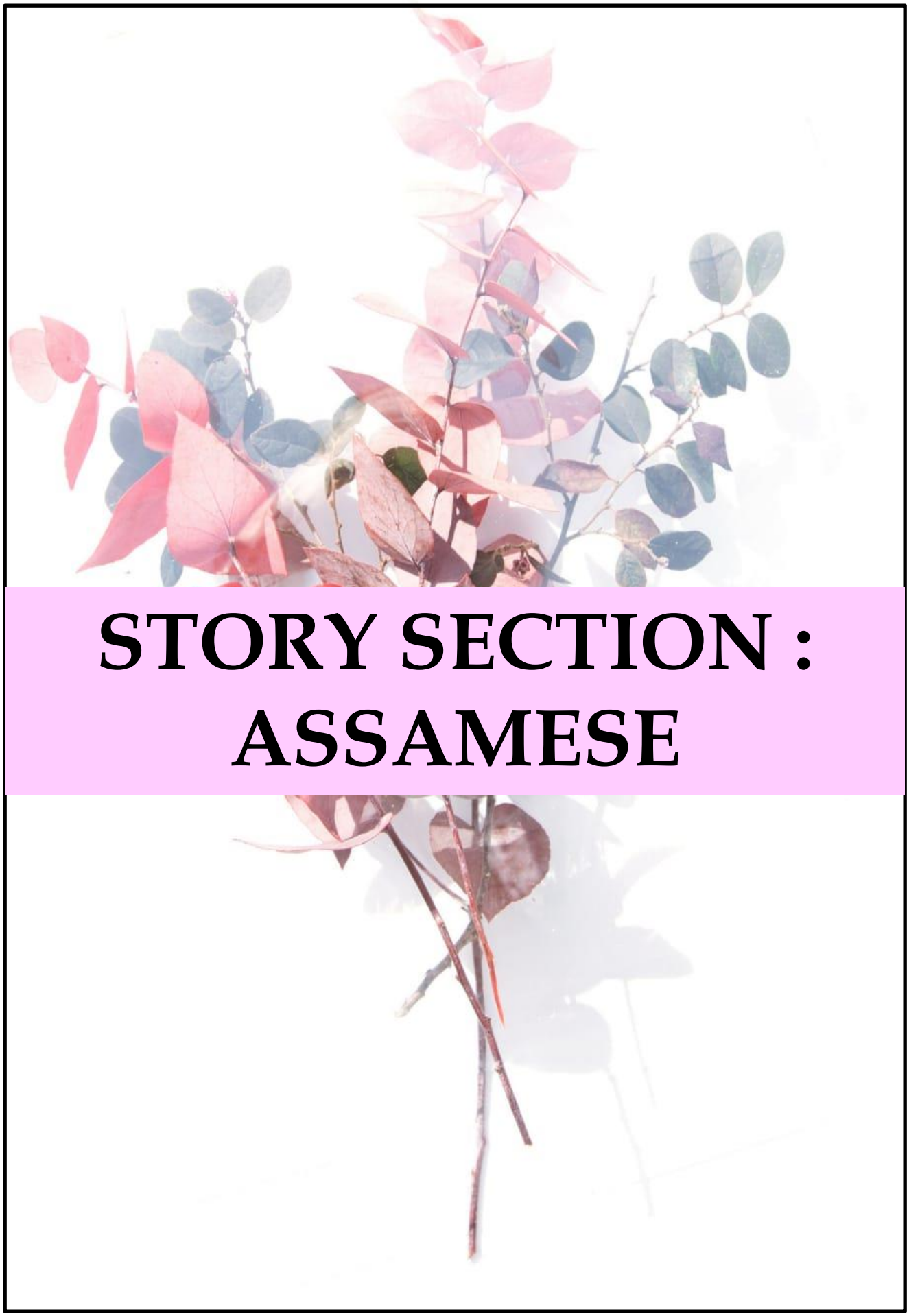
Dead people float because of gasses.
When a person drowns, their lungs fill with water, which makes them sink. They float back up because the human body releases gas when it dies – making them lighter than the water.

Winds have shadows.
They say you can't see the wind, only feel it – however, this is actually not true. Wind can cast shadows, they're just not visible to the naked eye and need to be processed via machine.

Sound is visible.
Every time you see a vibration, you're seeing sound.

A light that never went out
A neon lamp was switched on during the Great Depression and continued to burn until it was discovered some 77 years later. The electricity bill came up to a whopping $17,000!

Human Beings Glow
We as humans are bioluminescent, not unlike the jellyfish and fireflies. However, the light we emit is much too weak for our eyes to detect it.



STORY SECTION : ASSAMESE

ডিগ্ৰী

ড° দিব্যজ্যোতি কাকতি
সহকাৰী অধ্যাপক

: ডেৰশ টাকা মাত্ৰ বাবু? এইটো পইচাত কি বাজাৰ কৰিম? পুৰা দিন কাম কৰিলো। একশ টাকা কাটি দিলি!

: মনে মনে থাক! আহিবি দেৰিকৈ, পইচা কিন্তু পুৰা লাগে!

: এক ঘন্টাইটো দেৰি হৈছিল! ছোৱালীটোৰ জ্বৰ বাবু! কৈছোয়েই তোক।

: ভাত খাইছিলি নাই? চাহো দেখোন পাইছিলি!

: বহুত বেয়া মানুহ ৰে তই! তোৰ ঘৰত কামেই কৰিব নাপায়! আৰু কোনোদিন নাহো! কাণ ধৰি কছম খালো!

: এহ যা যা! নিজে কাম বিচাৰি বিচাৰি আহিবি হাতত পইচা নাই বুলি কৈ! তঁহতৰে আকৌ মুখত ডাঙৰ কথা! ভৰি নিদিবি আজিৰ পৰা মোৰ ঘৰত, চাল্লা ভিক্ষাৰীহঁত!

কিবাকিবি ভোৰভোৰাই অসন্তুষ্ট মনে গুচি গ'ল দিন হাজিৰা কৰিবলৈ অহা মানুহটো। কৰুণাকৰ গগৈৰ কটু বাক্য অসহ্যকৰ। কিন্তু অত্যধিক প্ৰতিবাদ তাৰ বাবেই বিপদজনক। বিয়লি পাৰ হৈ সন্ধ্যা হ'বৰ হৈছে, এজন যুৱক গেট খুলি সোমাই আহিছে গগৈৰ ঘৰলৈ। চোতালৰ পৰাই যুৱকজনে মাত লগালে,

: ছাৰ।

গগৈ ভিতৰলৈ যাব খুজিছিল। যুৱকজনে মাত লগোৱাত তেওঁ ঘূৰি চায়।

: চিনিব পৰা নাই তোমাক। কোৱাচোন।

: ছাৰ, দৰিদ্ৰ আৰু চৰকাৰৰ বিভিন্ন সা-সুবিধাসমূহৰ পৰা বঞ্চিত লোকৰ আৰ্থিক সাহায্য আৰু সজাগতাৰ উদ্দেশ্যে আমি যি সংগঠন খুলিছো, তাৰে উদ্বোধনী সভাখনিত আপোনাক বিশিষ্ট অতিথি ৰূপে নিমন্ত্ৰণ কৰা হৈছে। যোৱাকালি প্ৰধান সম্পাদকে আপোনালৈ ফ'ন কৰি জনাইছিল ছাগৈ।

: হয় হয়, কৰিছিল ফ'ন।

: সেই নিমন্ত্ৰণি পত্ৰখনি আপোনাক দিবলৈ আহিছো। এইখন লওঁক ছাৰ।

: হয়নেকি? ভাল বাৰু দিয়া দিয়া। আহাঁচোন ভিতৰলৈ।

বৰ ভদ্ৰ ল'ৰা, মুখত হাঁহি বিৰিঙি থাকে। গগৈৰ কিবা এটা ভাল লাগিল যুৱকজন। অলপ আগতে উঠি থকা খংটো কিছু কমি আহিল।

: নালাগে ছাৰ, পিছত কেতিয়াবা, আজি নবহো দিয়ক।

চিঠিখন যুৱকজনে গগৈৰ হাতলৈ আগবঢ়াই দিয়ে। গগৈয়ে চকু ফুৰাই চাই দেখে 'প্ৰতি কৰুণাকৰ গগৈ' বুলি লিখা আছে খামটোত।

: হেৰা, মোৰ নামটো কোনে লিখিছে বাৰু?

: ছাৰ, সম্পাদকে নিজেই লিখিছে সকলোলৈকে। বানান ভুল কৰিছে নেকি?

: জীৱিত ব্যক্তিৰ নামৰ আগত শ্ৰী, শ্ৰীযুত ইত্যাদি লিখিব লাগে। এই ভুলবোৰ এজন সম্পাদকে কৰিলে শোভা নাপায়।

: হয় ছাৰ, ঠিক কৈছে। তেওঁ কথাটো মন কৰিব লাগিছিল। বৰ ডাঙৰ ভুল কৰিছে দেই।

তোষামোদৰ চেষ্টাৰে যুৱকজনে গগৈকে সমৰ্থন কৰিলে।

: অৱশ্যে মোৰ নামটোৰ আগত শ্ৰী বা শ্ৰীযুত নিলিখিলেও হয়।
: কি কয় ছাৰ?
যুৱক আচৰিত।
: ড° কৰুণাকৰ গগৈ। এইদৰে লিখিবলৈ ক'বা। সভাতো মোৰ নামটো একেদৰেই ক'বা।
: অ, ঠিকেইটো। ড° বুলি লিখা নাই। মূল বস্তুটোয়েই দেখোন থাকি গ'ল। বেয়া নাপাব ছাৰ! কথাটো মই সম্পাদকক ক'ম। ভাল বাৰু এতিয়া আহো দিয়ক। সভাত আপোনাৰ উপস্থিতি কামনা কৰিলো।
: বেয়া নাইপোৱা। তেওঁ ছাগৈ নাজানে। তোমাকে ক'লো সেয়ে। ঠিক আছে, নিশ্চয় যাম।
যুৱকজন গ'লগৈ। গগৈও খন্তেক বাৰান্ডাতে বহিল। বাতৰি কাকতখন মেলি ল'লে। হাতত প্ৰান্তিকখন লৈ গগৈৰ খুলশালী সুশোভিতাও বহি আছিল আগফালৰ কোঠাটোৰ প্লাষ্টিকৰ চকীখনত। এনেতে গগৈৰ একমাত্ৰ ল'ৰা নিয়ৰ, মাহীয়েকৰ ওচৰলৈ লৰ মাৰি আহে।
: মাহী মাহী কি কৰিছা?
: আহা নিয়ৰ! তোমাৰ লগত খেলিম, কথা পাতিম বুলি ৰৈ আছো। অলপ পিছত তুমি আকৌ পঢ়াত বহিবগৈ লাগিব নহয়।
: মইচোন ৰাতিপুৱা পঢ়িলোৱেই। আজি দেওবাৰ। কাইলৈৰ পৰা আকৌ school খুলিব।
: গধুলি সদায় অকণমান হ'লেও পঢ়িব লাগে।
: সদায় পঢ়োৱেই দেখোন।
: বাৰু কোৱাচোন, আজি ৰাতিপুৱা কি কি পঢ়িলা?
: Geometry পঢ়িলো। 30, 40, 50, 60, 70, 80 আৰু 90 angle draw কৰিলো। protector use কৰি। traingle, rectangle, square এইবোৰো draw কৰিলো।
: বাহ! হয় নেকি মোৰ সোণ!
মাহীয়েকে নিয়ৰক কাষতে বহুৱাই ল'লে।
: পিছে নিয়ৰ, এই যে কোণ বা angle বোৰ 30, 60, 90 বুলি কৈছা। আচলতে এইদৰেহে ক'ব লাগে, 30 ডিগ্ৰী, 60 ডিগ্ৰী বা 90 ডিগ্ৰী। আৰু এই ডিগ্ৰীটো বুজাবলৈ এটা সৰু শূন্য মানে zero (০) ৰ দৰে চিহ্ন অৰ্থাৎ symbol ব্যৱহাৰ কৰা হয়।
: এইবোৰো ডিগ্ৰী নেকি? মোৰ যে এদিন অকণমান জ্বৰ উঠিছিল, তুমি দেখোন কপালখন চুই কৈছিলা, 100 ডিগ্ৰী মান হ'ব বুলি। সেইটো কি বেলেগ ডিগ্ৰী মাহী?
: তেতিয়া মই 100° Fahrenheitৰ কথা কৈছিলো নিয়ৰ। সেয়া তোমাৰ body temperature বা শৰীৰৰ উষ্ণতা। শুনা, ডিগ্ৰী মানে হৈছে কিছুমান বিশেষ ৰাশিৰ মাত্ৰা বা জোখ। ৰাশি বুজি পাইছানে? ওজন, উষ্ণতা, দৈর্ঘ, সময় অৰ্থাৎ weight, temperature, length, time এই সকলোবোৰেই ৰাশি। ডিগ্ৰীৰ দ্বাৰা শিক্ষাগত অৰ্হতাও বুজোৱা হয়।
: শিক্ষাগত অৰ্হতা? এইটো কি মাহী?
: তুমি কিমান পঢ়িছা, কি কি certificate পাইছা তাৰেই এক মাপকাঠি এইয়া। যিমানেই পঢ়িবা, উচ্চ পৰ্যায়ৰ শিক্ষা গ্ৰহণ কৰি highly educated হ'বা, তোমাৰ ডিগ্ৰীবোৰ সিমানেই ডাঙৰ হৈ গৈ থাকিব।
: হয়নেকি মাহী? মোক তেন্তে ইমান ডাঙৰ এটা ডিগ্ৰী লাগে।
হাতদুখন যিমান পাৰি বহলকৈ মেলি দিলে নিয়ৰে। সুশোভিতাৰ হাঁহি উঠিল।
: তাৰ বাবে তুমি এতিয়াৰ পৰাই ভালদৰে মনোযোগ দি পঢ়িব লাগিব নিয়ৰ। কিন্তু, তাতকৈয়ো গুৰুত্বপূৰ্ণ আৰু প্ৰয়োজনীয় কথাটো হ'ল যে, ইমান এটা ডাঙৰ ডিগ্ৰী পোৱাৰ পিছত তুমি জীৱনত কি কি শিকিলা। তোমাৰ চিন্তাধাৰা, আচাৰ-ব্যৱহাৰ, কথা-বতৰা কেনে ধৰণৰ। শিক্ষাৰ জড়িয়তে লাভ কৰা জ্ঞানৰ প্ৰভাৱত মন অহংকাৰশূন্য আৰু হৃদয় নিৰ্মল হ'লেহে সেই শিক্ষাৰ মূল্য থাকে। যদি তুমি এইকণো নিশিকিলা, তেন্তে তোমাৰ ডিগ্ৰীটো বুজাবলৈ ব্যৱহাৰ কৰা সৰু শূন্যৰ দৰে চিনটো এটা বৃহৎ শূন্যত পৰিণত হ'ব! এটা Big zero।

অলপ দূৰৈত বহি বাতৰি কাকত পঢ়ি থকা গগৈ, সুশোভিতাৰ কথাষাৰ শুনি জঠৰ হৈ পৰিল। সুশোভিতাই কথাবোৰ দৰাচলতে কাক কৈ আছে? বৰ অস্বস্তি অনুভৱ কৰিছে তেওঁ। কিন্তু বহাৰ পৰা উঠি গ'লেই সুশোভিতাই বুজি পাব যে তাইৰ কথাই তেওঁক আঘাত কৰিছে। নাই নাই। তাইৰ কথা নুশুনাৰ ভাও জুৰি একান্ত মনে বাতৰি কাকতখনকে বৰ গুৰুত্ব দি পঢ়ি দেখুৱালে। ইফালে নিয়ৰে প্ৰশ্ন কৰি গ'ল মাহীয়েকক।

: বেছিকৈ পঢ়িবলৈ University লৈ যাব লাগে ন মাহী? মাই মোক কয়, তুমি যে Physics পঢ়িলা সেই কাৰণে star, planet, sun, moon, earth এইবোৰৰ কথা ভালকৈ জানা। মই night sky বহুত ভাল পাওঁ। ইমানবোৰ star ওলায়। জিলিকি থাকে।

: star, planet মানে গ্ৰহ-নক্ষত্ৰ, পৃথিৱী, চন্দ্ৰ, সূৰ্য এইবোৰ আকাৰত বহুতেই ডাঙৰ নিয়ৰ। এইবোৰৰ বিষয়ে পঢ়াৰ ওপৰিও আমি পদাৰ্থবিজ্ঞান মানে Physicsত এনে কিছুমান বস্তুৰ বিষয়েও শিকিছিলো, যিবোৰ আকাৰত বহুত সৰু। ইমানেই সৰু যে আমাৰ সাধাৰণ চকুৰে দেখা পোৱাটো সম্ভৱ নহয়। Atoms and molecules অৰ্থাৎ পৰমাণু আৰু অণুৰ কথা ডাঙৰ হ'লে তুমি নিজেই বুজিবা। যিকোনো পদাৰ্থ অণু আৰু পৰমাণুৰেই গঠিত। ইয়াতকৈও ক্ষুদ্ৰ ক্ষুদ্ৰ কিছুমান কণা মানে particle আছে, যাক কোৱা হয় electron, proton, neutron, quark ইত্যাদি ইত্যাদি। আগলৈ Physics পঢ়িলে তুমি মোতকৈও ভালদৰেহে কথাবোৰ জানিব পাৰিবা!

: ইমান বেছি সৰু নে? এইবোৰৰ কথা জানিবলৈ বহুত পঢ়িব লাগে নেকি? যিবোৰ বস্তু আমি চকুৰেই নেদেখো, সেইবোৰৰ কথা জানি কি কৰিম মাহী?

শিশু নিয়ৰবোৰ যে প্ৰশ্ন। সুশোভিতাই নাহাঁহি নোৱাৰে।

: নহয় নিয়ৰ। ক্ষুদ্ৰ হ'লেও গুৰুত্ব কিন্তু কম নহয়। সেইবিলাক কণাৰেই যিকোনো পদাৰ্থ গঠিত হৈছে। সেয়ে পদাৰ্থবিজ্ঞনত, পদাৰ্থবোৰৰ ধৰ্মবোৰ ভালদৰে বুজিবলৈ এই কণাবোৰৰ বিষয়েও জনাটো অত্যন্ত আৱশ্যক। আকাশৰ গ্ৰহ-নক্ষত্ৰৰ দৰে দূৰৰ বস্তু চাবলৈ আমাক লাগে দূৰবীক্ষণ বা telescope। অতি ক্ষুদ্ৰ বস্তুৰ পৰ্য্যবেক্ষণৰ বাবে অণুবীক্ষণ বা microscopeৰ আৱশ্যক।

: Telescope আৰু microscope?

: হয়। ঠিক যেন মানুহৰ মনৰ দূৰদৃষ্টি আৰু অন্তৰদৃষ্টি।

: মানুহৰ মনৰ দৃষ্টি?

: হয় নিয়ৰ। ভৱিষ্যতে সংঘটিত হ'বলগীয়া ঘটনাৰ অনুমান বৰ্তমানতে কৰিব পৰা গুণেই হৈছে দূৰদৃষ্টি। ধৰি লোৱা তুমি আজি কাৰোবাৰ লগত কাজিয়া কৰিলা। ভৱিষ্যতে, সুবিধা পালে তেওঁ তোমাৰ বিঘিনিও ঘটাব পাৰে। কথাতে কোৱা হয়, মানুহ পৰিস্থিতিৰ দাস। সৰু-বৰ একো নাই। সেয়ে দূৰদৃষ্টি সম্পন্ন মানুহে মিছাতে কন্দল নিজৰ শত্ৰু বঢ়াই নলয়।

: হয় দেই মাহী। তুমি ঠিক কৈছা।

: অন্তৰদৃষ্টিৰো সমানেই প্ৰয়োজন নিয়ৰ। ক্ষুদ্ৰাটি-ক্ষুদ্ৰ বস্তুবোৰ খালী চকুৰে দেখা নোপোৱাৰ দৰে আনৰ মনৰ আৱেগ অনুভূতিবোৰো সহজে বুজা নাযায়।

: মাহী! এইবাৰ তুমি কি ক'লা, মই কিন্তু বুজি পোৱা নাই।

: মই যদি তোমাক খুব গালি পাৰো, বেয়াকৈ কওঁ, তোমাৰ কেনে লাগিব নিয়ৰ?

: তুমি জানো মোক মৰম নকৰা? মোৰ যে চকুপানী ওলায় যাব তুমি গালি পাৰিলে।

নিয়ৰক কাষ চপাই আনি সুশোভিতাই গালতে টপকৈ চুমা এটা খালে আৰু সুধিলে,

: এতিয়া কেনে লাগিল?

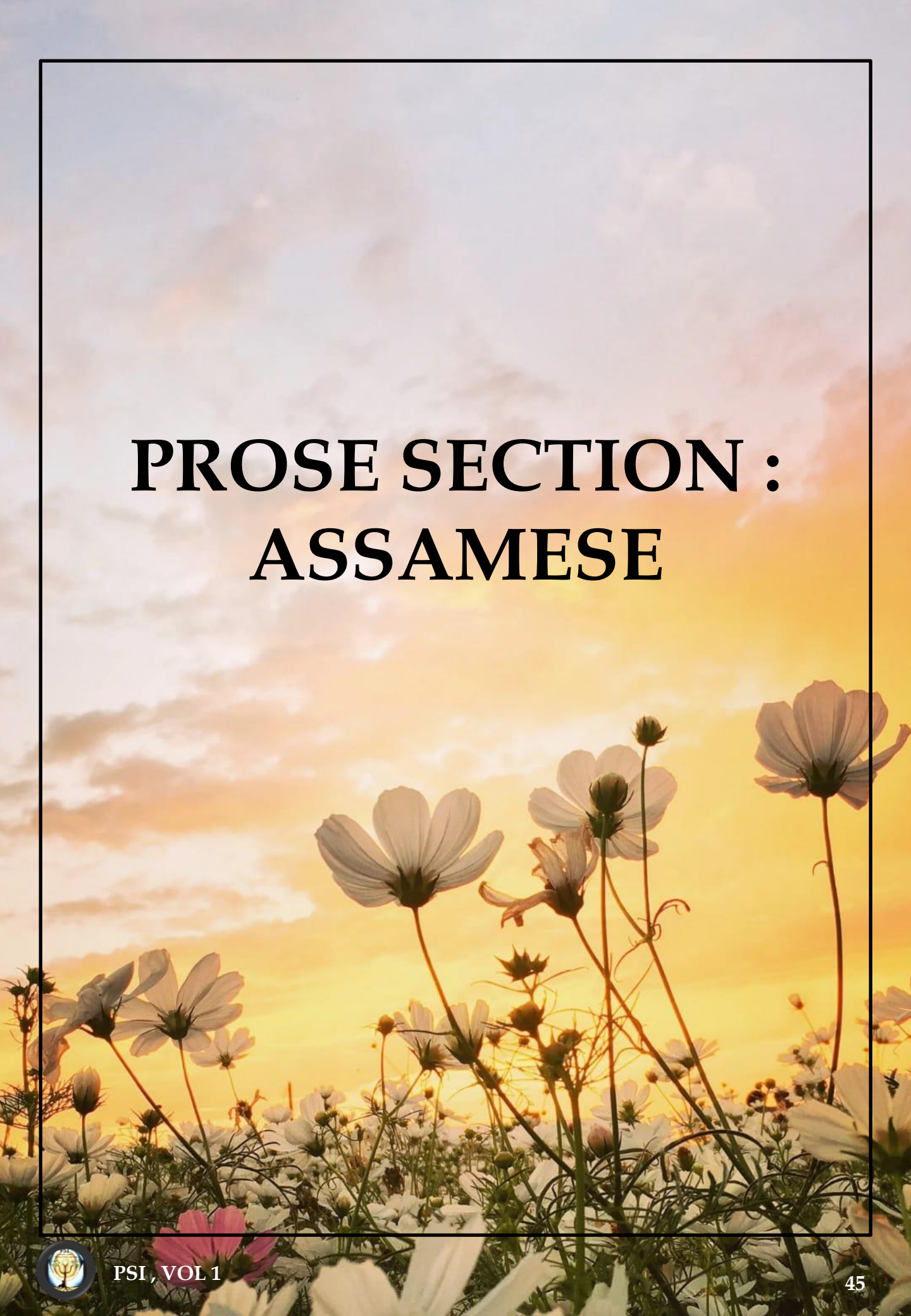
: মোৰ বহুত ভাল লাগে তুমি এনেকৈ মোক মৰম কৰিলে!

: আনৰ মনৰ অনুভৱ নিজে বুজিব পৰা গুণেই অন্তৰদৃষ্টি। সচাঁ মৰমে সকলোকে আনন্দ দিয়ে। মনত আঘাত দিয়া কথা, কাকো কোৱাটো উচিত নহয়। কাৰোবাক অপমান কৰিলে, তেওঁৰ মনত কেনে অনুভৱ হয়; সেইটো, অন্তৰদৃষ্টি সম্পন্ন মানুহে খুব সুন্দৰকৈ বুজি পায়। সেয়ে তেওঁলোকে

কাৰো মনতে অকাৰণত কষ্ট নিদিয়ে।
: বুজি পাইছো এতিয়া।
: প্ৰকৃত শিক্ষাৰ দ্বাৰা মানুহৰ দৃষ্টিভংগী শুদ্ধ আৰু সুন্দৰ হয়। জ্ঞান দৃষ্টিশক্তিৰ দৰে আৰু শিক্ষা হৈছে চকু। শিক্ষা থাকিও সৰু সৰু কথাবোৰেই বুজি নোপোৱাসকল, যেন চকু থাকিও দৃষ্টিহীন। সেয়ে তুমি এতিয়াৰ পৰাই, নিজৰ পঢ়াৰ লগতে তোমাৰ জীৱনৰ বাবে প্ৰয়োজনীয় কথাবোৰো অতি
গুৰুত্বসহকাৰে শিকিবলৈ যত্ন কৰিবা দেই সোণ! তেতিয়াহে তুমি জীৱনত অৰ্জন কৰা ডিগ্ৰীৰ সাৰ্থকতা থাকিব।
: মই এতিয়াৰ পৰাই চেষ্টা কৰিম মাহী। তুমি মোক এনেকুৱা কথাবোৰ মাজে মাজে কৈ থাকিবা।

মাহীয়েকে নিয়ৰৰ গালত মৰমতে আকৌ এটা চুমা খালে। ইফালে লাজতে ৰঙা-চিঙা পৰি বহাতে বহিয়েই থাকিল ডঃ কৰুণাকৰ গগৈ। পদাৰ্থবিজ্ঞানৰ আলোচনাৰ মাজেৰে সুশোভিতাই নিয়ৰৰ লগতে গগৈকো আজি ভাল শিক্ষা দিলে।

PROSE SECTION : ASSAMESE



অসম ৰাজ্যৰ নৱ প্ৰজন্ম আজি কোন দিশে!

অভিজিৎ বুঢ়াগোহাঁই

স্নাতক ষষ্ঠ ষাণ্মাসিক

হয়! অসম ৰাজ্যৰ গৌৰৱজ্বল ইতিহাস আমি সকলোৱে পঢ়িছোঁ। আমি পোৱা বিজয়ী ইতিহাস সৃষ্টি কৰা মহান ব্যক্তিত্বধাৰী ব্যক্তিসকলৰ কথাও হয়তো কিতাপে পত্ৰই জানিবলৈ পাইছোঁ। প্ৰকৃতিয়ে অসম ৰাজ্যলৈ বুলি দিয়া আশীৰ্বাদবোৰো দেখিছোঁ, সাতখন ৰাষ্ট্ৰীয়উদ্যানেৰে ভৰপূৰ অসমে ৰাষ্ট্ৰলৈ আগবঢ়োৱা প্ৰকৃতিক ভাৰসম্যতাৰ গুৰুত্বৰ বিষয়ে কেৱল ৰাজ্যজুৰিয়ে নহয় সমগ্ৰ দেশতে আমি ইয়াক চৰ্চা কৰিছোঁ। দেশৰ ভিতৰতে সুকীয়া কলা-সংস্কৃতি, সৰ্বাধিক থলুৱা জনজাতি আৰু ভাষাৰে পৰিপূৰ্ণ অসমে সৃষ্টি কৰা ঐক্যতাৰ কথা আজি সমগ্ৰ বিশ্বতে একক আৰু অনন্য।

ইয়াৰ লগে লগে কিন্তু এই সকলোবোৰক অনাগত দিনত প্ৰতিনিধিত্ব কৰি কান পাতি লবলগীয়া অসম ৰাজ্যৰ যুৱশক্তিটো আজি কোন দিশে...? আমি কিমানে জানো বা ইয়াক লৈ অসমৰ অভিভাৱকস্বৰূপ ব্যক্তিসকল আজি সচেতন নে? ইয়াৰ বাবে তেওঁলোকে এক সুস্থ আলোচনাৰ পৰিবেশ গঢ় দিব পাৰিছে নে? নিশ্চয় এই সকলোবোৰ প্ৰশ্নৰ উপস্থাপন কৰাৰ উপযুক্ত সময় এইয়া। যেতিয়া অসমৰ মান, গুণ-গৰিমা আমাৰ আহিবলগীয়া আজিৰ নৱপ্ৰজন্মখিনিৰ হাতত পৰিব, ই যে সুৰক্ষিত হৈ থাকিব আজিৰ দিনত আমি কিমানে দাঠি কব পাৰিম। ই নিশ্চয় আমাৰ সকলোৰে বাবে এক অনাকাংশিত চিন্তা। মই বিশ্বাস কৰোঁ অসম ৰাজ্যক ভাল পোৱা প্ৰতিজন সচেতন আৰু চিন্তাশীল ব্যক্তিৰ মাজত এনে প্ৰশ্নই বিৰাজমান।

সেয়া যি কি নহওক - মানৱসভ্যতাৰ ইতিহাসৰ পাত লুটিয়ালে পোৱা যায় মানুহেই এই হেজাৰ বছৰীয়া সভ্যতাৰ সৌধনিৰ্মাতা। বিভিন্ন সময়ত হোৱা উত্থান-পতনৰ মাজেৰে আমি আজি সভ্যতাৰ একবিংশ শতিকাত উপনিত হৈছোঁহি। য'ত বিজ্ঞানৰ মহাজয় আৰু অন্ধবিশ্বাস, কু-সংস্কাৰৰ পতনেই হয়তো আজিৰ শতিকাত জীৱ শ্ৰেষ্ঠ বুলি ভবা! মানুহক জীয়াই থাকিবলৈ সভ্যতাৰ একেবাৰে শ্ৰেষ্ঠ যুগটোৰ সক্ষম কৰি তুলিছে আৰু সেয়েহে হয়তো আজি আমি নিজকে পশুত্বৰ পৰা দূৰত ৰাখি শ্ৰেষ্ঠ বুলি দাবী কৰিছোঁ। কিন্তু প্ৰশ্ন হয় বংশগতিৰ সন্ধান কৰোতে ডাৰ্ উইনে সন্ধান পাইছিলেনে বাৰু মানৱদেহত ৰৈ যোৱা অপ্ৰভাৱিত পশুত্ব গুণৰ উপস্থিতি? য'ত পশুত্ব শুপ্ত আৰু মানৱতা জাগৃত গুণৰ সমাহাৰেই হ'ল মানৱতা। আজি যেন এই দুয়োটা গুণৰ সমতা ৰক্ষা কৰাত ব্যৰ্থ হৈছে মানৱজাতি, ব্যৰ্থ হৈছে আজিৰ অসমৰ ভৱিষ্যত প্ৰজন্ম। পশুত্ব গুণৰ মহাপয়োভৰ আজি বিশ্বৰ প্ৰান্তে-প্ৰান্তে ঠায়ে-ঠায়ে ব্যতিক্ৰম নহয় আজি সভ্যতা-সংস্কৃতিৰ শ্ৰেষ্ঠ বুলি ভবা অসম ৰাজ্যও। সকলো ক্ষেত্ৰতে বন্য উল্লাসত মগন আজিৰ অতি আধুনিক যুগৰ মানৱজাতি। বিশ্বক বাদ দি যদি অসমৰ ক্ষেত্ৰতে হওঁক, বৃহৎ সংখ্যক সংখ্যা গৰিষ্ঠতাৰ স্থানত থকা নৱপ্ৰজন্ম আজি মগ্ন আদিম উল্লাসত যেন আজিৰ মানৱসভ্যতাৰ ঘড়ী বিপৰীত দিশে গতিমান। সমগ্ৰ অসমত আজি মদ-ভাঙ, ড্ৰাগছৰ লগতে উশৃংখল জীৱনধাৰাৰ প্ৰবাহিত সোঁত প্ৰমাণ হিচাপে যোৱা কেইদিনমানত চৰকাৰে লবলগীয়া হোৱা পদক্ষেপবোৰ চালেই হল। অপ্ৰিয় হলেও সত্য পশ্চিমীয়া দেশবোৰৰ অতি আধুনিক সভ্যতাক অনুকৰণ কৰিবলৈ গৈ আজি উত্থাপন হৈছে অবিশ্বাস্য যেন লগা নাৰী স্বাধীনতা, যৌন স্বাধীনতা, সমকামীতা স্বাধীনতা, লীভ্-টুগেদাৰ্ আদিৰ দাবী সভ্যতাৰ চহকী বুলি ভবা আজিৰ অসমৰ যুৱসমাজৰ পৰা। এইয়া সভ্যতাৰ চহকী বুলি গৌৰৱ কৰি থকা অসম ৰাজ্যৰ আদিম যাত্ৰা নেকি বাৰু? কিন্তু এই অনাকাংক্ষিত যাত্ৰাৰ অন্তৰ্নিহিত কাৰণ কি হব পাৰে! সেয়া যি হলেও কিন্তু ইয়াৰ নিৰাময়ৰ বাস্তৱমুখী উপায় উদ্ভাৱন কৰাটো অতি প্ৰয়োজন। প্ৰশ্ন হয়, বৰ্তমান সময়ত বৃহৎ সংখ্যক যুৱশক্তি বিভিন্ন দিশত কল্যাণকামী সৃষ্টিমূলক কৰ্মত ব্ৰতী হোৱাৰ পৰিবৰ্তে কেৱল মাত্ৰ কৃত্ৰিম জগতৰ অস্থায়ী তৃপ্তি লোৱাতহে

মগ্ন। কিছু সংখ্যক ব্যতিক্রম যদিও সেয়া এপাচি শাকত এটা জালুক সদৃশ কথা। বর্তমান সময়ত দেখা গৈছে যুৱশক্তিটো জীৱনমুখী হোৱাৰ পৰিবর্তে কেৱল মাত্র জীৱিকাক গুৰুত্বদি আগবাঢ়িব ধৰিছে যত

মৌলিকভাবে থাকিব লগীয়া মূল্যবোধ, সহনশীলতা আজি ক'ৰবাত ছিটিকি পৰিছে আৰু কেৱল মাত্র আত্মকেন্দ্রিক হৈ পৰা পৰিলক্ষিত হৈছে। নিশ্চিতভাৱে ই আহিবলগীয়া অসমৰ ভৱিষ্যতৰ বাবে শুভলক্ষণ হব নোৱাৰে। মুখ্যমন্ত্রীয়ে কোৱাৰ দৰে বর্তমান সময়ত সর্বভাৰতীয় বিভিন্ন পৰিক্ষাবোৰত অসমৰ প্রদর্শন আজি অতি দুখ লগা ধৰণৰ উদাহৰণ হিচাপে সদ্যঘোষিত UPSC(2021) ফলাফলত অসমৰ পৰা কেৱল দুজনতে সীমাবদ্ধতা থকিবলগা হৈছে। শেহতীয়াভাবে ক্রীড়া ক্ষেত্রত কিছু পৰিৱর্তন আহিছে যদিও ই তেনেই নগণ্য। গতিকে অসমৰ ইমান বৃহৎ যুৱশক্তিৰ
অপচয় হৈ আহিছে আমাৰ সুনির্দিষ্ট পথ প্রদর্শনৰ অভাৱ আৰু অনিশ্চয়তাৰ ফলশ্রুতিত, গতিকে মই নিজে তাৰ মাজৰে এজন হিচাপে অনুভৱ কৰোঁ এতিয়া আমাৰ বুদ্ধিজীৱি সমাজ, শিক্ষক সমাজ, অভিভাৱক সমাজ, আৰু অসমৰ সচেতন সমাজ কেৱল মাত্র নিৰাপদ দূৰত্বত অৱস্থান কৰি এই বিশাল শক্তিৰ ভাণ্ডাৰস্বৰূপ নৱপ্রজন্মক নিন্দা-সমালোচনা কৰাতে সীমাবদ্ধতা নাথাকি তেওঁলোকক সঠিক পথৰ সন্ধান দি সু-বিশাল যুৱপ্রজন্মৰ মাজত অন্তর্নিহিত হৈ থকা মানৱসম্পদ চিনাক্ত কৰি সু-পৰিকল্পিত পদ্ধতিৰে প্রয়োগ কৰি অসমৰ ভৱিষ্যত আৰু সম্পদ সৃষ্টি কৰাত উদ্যোগ লবি লাগিব।

ইয়াৰ বাবে প্রয়োজন মাথোঁ আমাৰ নিজৰ ঘৰখনৰ পৰা আৰম্ভ কৰি সমাজ তথা ৰাজ্যৰ লগতে বিশ্বপৰিসৰলৈ প্রদর্শন কৰিব পৰিব লাগিব সত্য প্রতিষ্ঠিত তথা সু-পৰিকল্পিত আৰ্হি। নিশ্চিতভাবে ইয়াৰ বাবে প্রয়োজন হব মনৰ পৰা উদ্ভাৱন হোৱা মানৱীয় প্রমূল্যবোধৰ প্রবল ইচ্ছাশক্তি তাৰ লগে লগে যিবোৰ কাৰকে এই যুৱ উশৃংখলতাৰ প্রধান হোতাস্বৰূপে ক্রীড়া কৰি আছে সেই কাৰক সমূহক সুচাৰুপে বিশ্লেষণ কৰি পুলিয়ে-পুখাই উঘালী পেলাব লাগিব। সেয়েহে এতিয়া কেৱল মাত্র কথাৰ ফুলজাৰি ফুটাই বা মদ-ভাঙ নিৱাৰণী অভিযানৰ দৰে প্রচাৰ মাধ্যমত আত্ম প্রচাৰৰ উদ্দেশ্যত নহয়, সঁচা অর্থত সত্যনিষ্ঠ মানৱীয় প্রমূল্যবোধৰ বার্তাবাহক হৈ যুৱশক্তিক সু-নেতৃত্ব দিয়াৰ হেঁপাহতে আগবাঢ়ি আহিব লাগিব আজিৰ জেষ্ঠ সমাজ। কোৱা হয় মানবসভ্যতা নগৰকেন্দ্রিক যদিও ইয়াৰ ঘাই শিপাডাল গ্রামাঞ্চলতহে। দেখা গৈছে আজিৰ যুৱসমাজ কৃষি বিমুখ, হয়তো কৃষিবিজ্ঞানৰ তথ্য-প্রযুক্তিৰে কৃষি কার্য কৰিবলৈ শিক্ষিত নৱপ্রজন্মৰ অভাৱ। কিন্তু কৃষিক বাদ দি কোনো এখন ৰাজ্য কেতিয়াও বিচৰা ধৰণে উন্নতি শিখৰলৈ যাব নোৱাৰে। সেয়েহে প্রয়োজন হৈছে এক বৃহৎ সংখ্যক শিক্ষিত যুৱকৰ নেতৃত্বত বিজ্ঞানসন্মতভাৱে কৃষিকার্যৰ বহল চর্চ্চা যত অর্ধশিক্ষিত আন এচামেও কর্ম মুখী হোৱাৰ অনেক স্থল পাব আৰু ইয়াৰ বাবে প্রয়োজন হব চৰকাৰৰ সদিচ্ছাৰ লগতে অভিভাৱক আৰু হৃদয়ৱান বৃহৎ পৰিসৰৰ সঁচা মানুহৰ আন্তৰিক প্রচেষ্টা। যোৱাকেইটা দিনত অসমৰ বিভিন্ন প্রান্তত বানপানীৰ সমস্যা আজি সমস্যা নহৈ মহাপ্রলয় সদৃশ হৈ পৰিছে সেয়েহে এতিয়া
প্রয়োজন হৈছে উপযুক্ত প্রশিক্ষণ দি বান নিয়ন্ত্রণৰ এক বৃহৎ প্রকল্প গঢ়ি তুলি যুৱশক্তিক মানৱসম্পদ হিচাপে গঢ় দিয়াৰ।

অন্যথা আজিৰ আমাৰ গৌৰাৱময় অসমৰ ভৱিষ্যত কলংকিত ইতিহাসৰ সাক্ষী হব লাগিব। তেতিয়া আমাৰ হাতত কেঁচা মালৰ নাটনি হব পুনৰাই ইয়াক নির্মান কৰিবলৈ। গতিকে বেলি মাৰ যোৱাৰ আগতেই সঠিক সিদ্ধান্ত আৰু সঠিক নেতৃত্বৰ যোগেদি ইয়াক সমাধান কৰাটো এতিয়া অত্যন্ত প্রয়োজন। নহলে ইতিহাসে কাকো ক্ষমা নকৰিব, সলনি কৰিব নোৱাৰিব ইতিহাসৰ পৃষ্ঠা। পৰাহেঁতেন কলংকিত নায়ক হিটলাৰে সলাই পেলালেহেঁতেন ইতিহাসৰ প্রচলিত ধাৰা সেয়েহে ৰাজ্যৰ মানৱতাবাদীৰ বুদ্ধিজীৱীকে ধৰি সকলোৱে এক মঞ্চ প্রতিষ্ঠাৰ যোগে আগবাঢ়ি ওলাই আহি শান্তিৰ এক মানৱীয় সভ্যতাৰ সৌধ নির্মান কৰিব লাগিব। এনেদৰে মই মোৰ, আমাৰ যুৱপ্রজন্মখিনিলৈ থকা আকাংক্ষা আৰু আশা ব্যক্ত কৰিলোঁ লগতে আশা ৰাখিছোঁ মানৱতাবাদী সুধী সমাজে বিস্তৃত বিশ্লেষণ আগবঢ়াই আমাক মানৱসম্পদ হিচাপে গঢ় দি অসমৰ ভৱিষ্যতৰ সুৰক্ষিত প্রহৰী হিচাপে গঢ় দিয়াত সমভাগী হোৱাৰ প্রয়াস কৰিব।

POETRY SECTION: ENGLISH

NOT TODAY

Gayatri Thapa
B.Sc 4th Sem

I try to write about a cause
But my verses stumble out false
Little girls are raped every day
How can I talk of hope today?

It is a permanent eclipse
look for the apocalypse
but the sun still rises each day
How can I talk of hope today?

Sunk in this quicksand of despair
With only questions and no answers
Who sins? What of karma? Who pays?
How can I talk of hope today?

I did not wish to have a girl
Bring her into this deviled world
Humanity died yesterday
How can I talk of hope today?

DISTURBANCE

Tapan Dahal
B.Sc 6th Sem

Disturbance And everything seemed to have
an addictive distortion,
as if along my being becoming consciously clueless..
Then through you,
the sudden winds of change appeared,
as amid the forest a lovely meeting happening.
You, wind of enlightenment masking for minutes,
if the ultimate source walking in ordinary garments.
To remind us of everything extraordinary in us..
You've been what we all needed..
disturbance to our blind cluelessness.
You gave me the eyes to be clueless in ever extending
vigour and beauty..
And now, here I go..
Free falling with my hundred naked selves,
upon green fields.
While the pure empathy makes my tears swiftly
roll down the ordinary cheeks
and the blood flowing keeping the chest of heart,
wide open in rejuvenating ecstasy.
Just like everyday failures,
we all need to pour a little eye opening disturbance in
our life to make it more fascinating.

PHYSICS

Achal Shah
Bsc 4th Sem

It's a book about Physics,
But written with a twist
Poetry & Physics can co exist;

Physics beauty burning bright,
In men search for natures might;
At its core, simplicity,
Framed by beautiful symmetry;

Everything work,
Because of physics.
Even your old kitchen appliances.
What about your father's car?
Without Physics,
It wouldn't go far.
Kids on see-saw learn about levers.

Physics is cool,
The evidence is clear,
It's so much fun,
Enjoy it my dear.

SEE THROUGH

Richard Gogoi
B.Sc 6th Sem

Come to me
Come to me, for I am not me.
Who am I!
Upon this rainy desert that does not cry.
Of Trinkets and unspoken Wizards,
And reapers even among such dreary deserts.
Hell must come to play,
Before your envy blames it unto a God of clay.
Heaven must be carried in your pockets.
For when the storm comes, nature's not going to reveal,
Who put the parts in the sockets.
One mightiest hero I was,
Until I saw the immortal abyssal ocean laughing at our local laws.
No phrasal parties,no painted particle playing poetry..
Only me,and thither a shore that never existed really.
Come,come,even though there's no such thing as time.
Only a lustful natural mind looking at itself,
Again and again,along some holy dime.
Let us not define what that is or should be.
Forget your hesitant vows,and for good come to me.
Come to me..
Aye,you righteous rule maker on the top of that tower.
How many have you yourself broken!
Right before you went curving into one crowded shower.
Aye,you Godman supposedly vibrating at some higher frequency.
With whom and how many have you travelled along!
Of my Era's kingly champions declaring haughty latency.
One laugh and one tear drop,but many smiles,
My creatures do walk longer when it's not about nautical miles.
Boredom, anxiety and sorrow,
Where has my joy left for?
Who did rob me on the road!
Was it of mere joy or pain unattended!
That it may sing it's bitter tunes,
To everyone that I was hiding through jeweled loons.
Dear dear,where is the end?
When has it even began! Don't you know!dear,
There was a time when every layman used to be a Superman.
But,now that the sky is too clear,
To ask them for another painter's lovely frontier.
Shall I find my dropped love again,
And give you all the passive intentionality,
Of tall trees that in silence explain.

POETRY SECTION : ASSAMESE

নাহৰৰ চহৰ
(উৎসগ: ডিগবৈ মহাবিদ্যালয়)

মনোজ শইকীয়া
(স্নাতকোত্তৰ চতুৰ্থ ষাণ্মাসিক)

থৰক-বৰক খোজখোজৰ
ঈশ্বৰ-মধ্যাকর্ষণবুজিছিলোঁ নাই(?)

হঠাত দেখিলোঁ,প্রাচীন নদীৰ পাৰত গজি
উঠা এখন নাহৰৰ চহৰ

বাট বোলোতেই পালোঁ অজস্র হাত,হাত নহয়
যেন ছীফার্ড গছৰ শিপা।
ইমান আটিল,ইমান উমাল।

এদিন নাহৰৰ সেউজীয়াৰে কবিতা
থাকোতে বন কেতেকীয়ে খপিয়াই নিলে মন পেপিৰাছ।
দুখৰ নদীত অৱগাহন কৰিব খোজোতে
দেখিলোঁ এই নদীৰ বুকুতো আছে এখন সাগৰ।
(ফেনিল সাগৰৰ তীৰত ৰৈ চাই থাকিলোঁ জলপৰীৰ
জলকেলিশুনি থাকিলোঁ সামুদ্রিক চেতাৰত ৰাগ
মালহাৰ)
সাগৰৰ বুকুতো এটা বেলি,এটা জোনজোনৰ পোহৰত
সেয়া কাৰ ছবি?

মই ডুবিলোঁ.....
এডিঙিলৈকে ডুবিলোঁ,ফুলা সৰিয়হ এডৰাত।
মই ডুবিলোঁ.....
কৃষ্ণগহ্বৰৰ ঠাৱনি নোপোৱা আন্ধাৰত

,হঠাত সাৰ পায় দেখিলোঁ
আহি থকা বাটটোৰ শেষতো সহস্র বাট।
এদিন কোনেওঁ কাকো ঢুকি নোপোৱাকৈ
হাতৰ বান্ধবোৰ সুলকি পৰিল আমাৰ।
ইমান পোহৰ,ইমান আন্ধাৰ!

বর্তমান মই এজন এলঝেইমাৰ ৰুগী। উঁইয়ে
খোৱা মোৰ মন-মগজুৰ চেৰিব্রাম। সকলো পাহৰিওঁ,মই
নাই পাহৰা
এটা দীঘলীয়া দেৱদাৰু পদূলি
আৰু নীলা এযুৰি চকু।

স্মৃতিৰ সোণোৱালী শৈশৱ

দক্ষিণা দুৱৰা
(স্নাতকোত্তৰ চতুৰ্থ ষাণ্মাসিক)

ক'ত হেৰাই গ'লি তই....

ৰে'লখনে উকিয়ালেই
এতিয়াও দৌৰ মাৰো
পথাৰৰ দাঁতিলৈ,
পকা নুনী আৰু হেলচ খোৱা
সময়বোৰো যে তোৰ নামতেই
উৎসৰ্গিত আছিল,
খিলখিলাই উৰি যোৱা হাঁহিৰ
ফোঁৱৰাবোৰৰ সন্ধানত
হাবাথুৰি খাওঁ এতিয়া....

স্মৃতিৰ বঁকিয়াইদি
আজি মোৰ সোঁৱৰণিৰ
নাওখনে ভটিয়াই বাট বুলিছে,
নিজকে চুই চাইছো
হেঙুলৰঙী কেনভাচত
ছবি আঁকি যোৱা ল'ৰালি
কঁপোৱা সেই শাৰ্দিক
তৰংগবোৰৰ গৰ্জনৰ মাজত;

হে ঈশ্বৰ!
ঘূৰাই দিয়া মোক সেই সময়,
য'ত, মই হেৰাই যাব খোজো
যান্ত্রিকতাৰ মাজৰ পৰা;
সোণসেৰীয়া শৈশৱৰ
মালিতা গুঠিবলৈ....

সময়

কৌশিক ডেকা
স্নাতকোত্তৰ চতুর্থ ষান্মাসিক

নিৰন্তৰ প্ৰবাহিত সময়
আহৰি নাই খন্তেকো ৰবলৈ,
জহি- খহি গল বহু সভ্যতাৰ
অস্তিত্ব চিৰদিনলৈ।
সময়ৰ সোঁতৰ হেনো
আৱেগ অনুভূতি একো নাই,
পাৰিজাত ফুল পাহিও
কালিলৈ মৰহি যায় ।
এবাৰ পাৰ হৈ যোৱা
সময় নাহে উভতি,
ৰৈ যায় কেৱল
চিলমিল স্মৃতি ।
সময় বৰ আপেক্ষিক
কেতিয়াবা হঠাতে পাৰ হৈ যায়,
কেতিয়াবা লাহে-ধীৰে
যেন কৃষ্ণগহ্বৰ এটি আছে ৰয়।

অব্যক্ত বাসনা

বিশ্বজিৎ হাজৰিকা
স্নাতকোত্তৰ চতুৰ্থ ষাণ্মাসিক

মৃত্যুৰ প্ৰিয় ঠিকনাত
তুমিবিহীন মোৰ এই জীৱন যাত্ৰা
পাতনি কেতিয়া আওৰাব বিচৰা নাই
শেষ কত হব মোৰ ধাৰণা নাই।

ক্ষণ গনিছোঁ কেৱল তোমাৰ অপেক্ষাত
অব্যক্ত বাসনাৰ গোলাপ পাহি তুমি
মই যদি তোমাৰ বাবে এখন ৰিক্ত হৃদয়
তেন্তে, তুমি মোৰ বাবে কি জানা?
পূৰ্ণতাৰ লক্ষ হেঁপাহৰ প্ৰাপ্তি।

কেতিয়াবা মদিৰা প্ৰাণ কৰিছানে
নিশ্চয় কৰা নাই ছাগৈ!
মদিৰাৰ ৰাগীত বাহিৰ হোৱা ব্যক্ত বেথাৰ
অব্যক্ত কথাবোৰ শুনাবাচোন..
অনুভৱ কৰিম প্ৰেমৰ মিছা অনুভূতি।

তুমি জানানে!
যাত্ৰা এটাৰ আৰম্ভণি কৰ পৰা হয়
মইত যেতিয়া আৰম্ভ হয়
আমিত যেতিয়া শেষ হয়
আৰু...
বেদনাৰ প্ৰত্যাশাত আশাৰ সঞ্চাৰ হয়।
মোৰ যাত্ৰাৰ আৰম্ভনি তোমাতেই
শেষ তোমাতেই
মাথোঁ তুমি পুনৰ আনৰ নহবা...

RECENT ACHIEVEMENTS

Swapan Limbu of BSc 6th Semester, Dept of Physics qualified the following national level entrance examinations:

Joint Admission Test for Masters (JAM) with AIR 96

Joint Entrance Screening Test (JEST) with AIR 48

Rhythm Dutta of BSc 6th Semester, Dept of Physics received prizes in the following categories during the Youth Festival:

Khayal: Silver Medal.

Bhajan: Jury's special award.

Ghazal: Jury's special award

Diganta Kalita of BSc 6th Semester, Dept of Physics has been selected for the post of constable of Assam Police Radio organization.

Joydeep Sur, B.Sc 4th Semester, Dept. Of Physics Won The 1st Prize In Quiz Competition At The 54th College Week

Barsha Kurmi , B.Sc 4th Semester,Department Of Physics Won The 2nd Prize In Badminton Doubles In The College Week

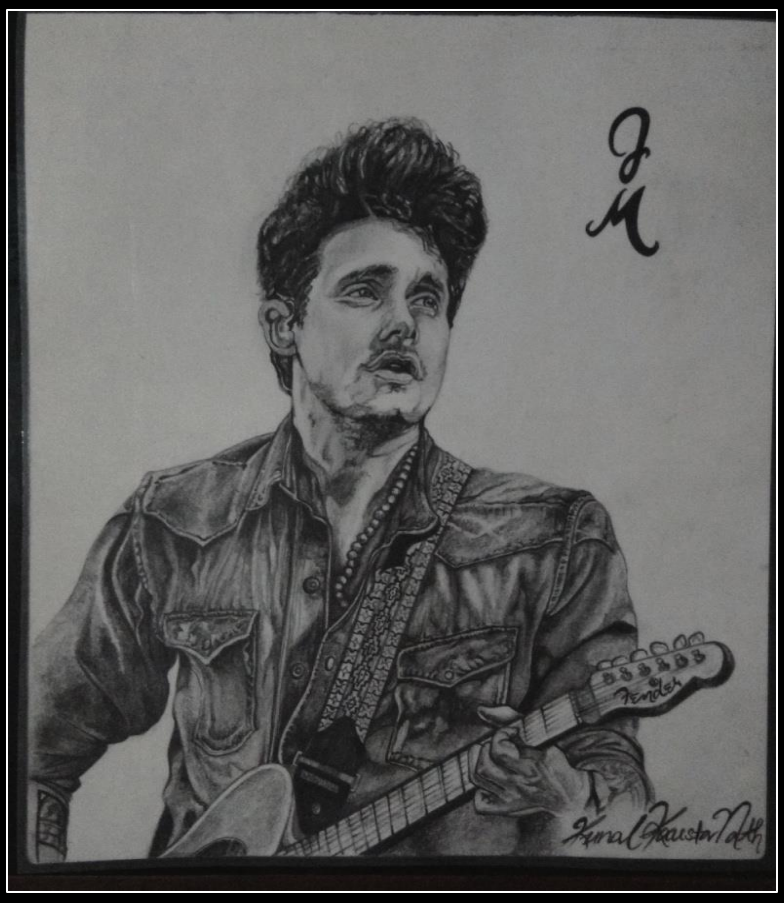
Priti Shah , B.Sc 4th Semester, Dept Of Physics Winner In Kho Kho Tournament And 3rd Prize In On The Spot Poem Composition (Hindi) In College Week

Shivam Lodh, Prakash Thapa, Sandipan Choudhury, Samujjal Sarkar , B.Sc 4th Semester, Department Of Physics Bagged The Title of 2nd Runner Up Of Cricket Tournament Held At College Week. (Pictures Respectively)

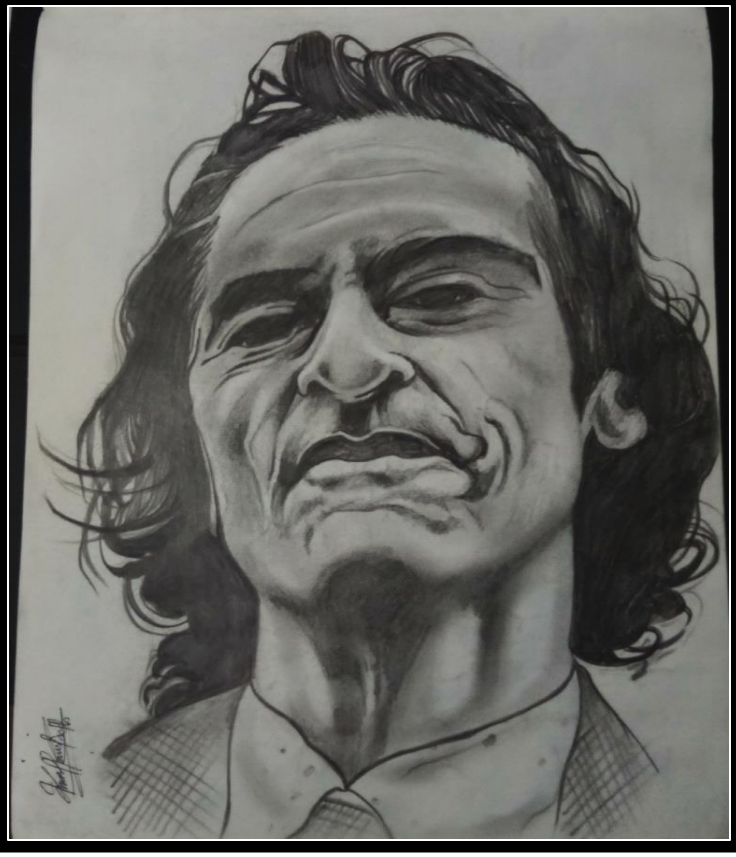
Shruti Sarma , B.Sc 4th Semester, Department Of Physics Won the Kho Kho Tournament Held In College Week

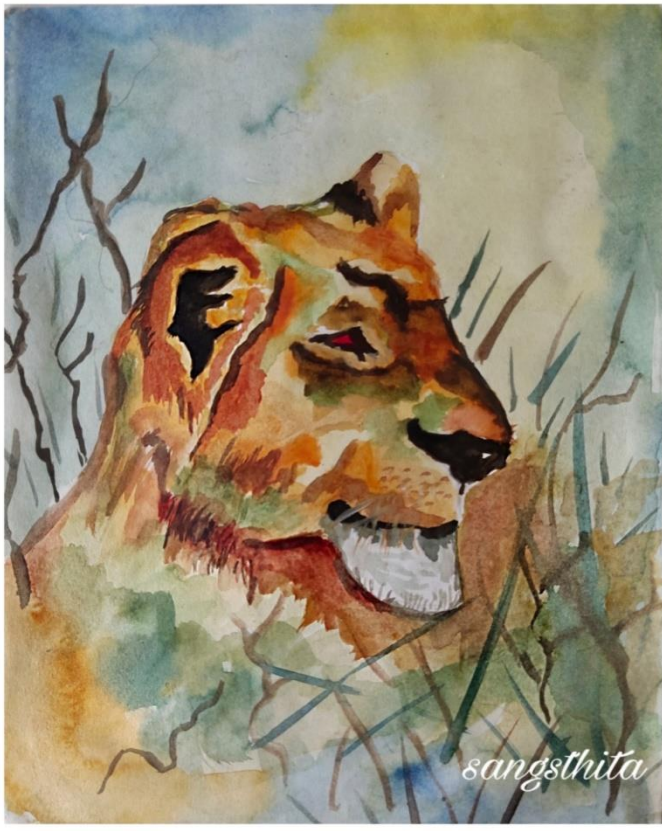
ART CORNER

Rhythm Dutta ,BSc 6th Semester



Kunal Kaustav Nath , B.Sc 6th Semester





Sangsthita Baruah, MSc 4th Semester

WALKING DOWN THE MEMORY LANE


GPS Map Camera
Digboi, Assam, India
9JV4+C8Q, Digboi, Assam 786171, India
Lat 27.393557°
Long 95.605801°
30/04/22 10:34 AM
Google


GPS Map Camera
Digboi, Assam, India
9JV4+C8Q, Digboi, Assam 786171, India
Lat 27.393561°
Long 95.605794°
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Google


GPS Map Camera
Digboi, Assam, India
9JV4+H85, Digboi, Assam 786171, India
Lat 27.39395°
Long 95.60596°
30/04/22 09:30 AM
Google


GPS Map Camera
Digboi, Assam, India
9JV4+C8Q, Digboi, Assam 786171, India
Lat 27.393555°
Long 95.605793°
30/04/22 11:11 AM
Google