# BCETIANS 2019-2020



UNDER THE MENTORSHIP OF IIT ROPAR BEANT COLLEGE OF ENGINEERING AND TECHNOLOGY GURDASPUR - 143521 (PB) An Academic Autonomous College by UGC, NAAC Accrediated (ESTABLISHED BY GOVT. OF PUNJAB) www.bcetgsp.ac.in

## BCETIANS 2019-2020



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It gives me immense pleasure that College Magazine BCETIAN 2019-20 is finally ready. I am proud of my students for having shown their talent and creativity through various articles written with incredible vision and fresh outlook. This is an active platform for faculty, staff and students to show their talents and imaginations in technical writing, essay and poetry writings. I express my appreciation to all the authors of the articles in this magazine.

I also take this opportunity to congratulate the Editorial team to make continuous efforts for the preparation of this issue of College Magazine.

> (Dr. Tejinder Singh Sidhu) Director









It is a matter of great pleasure that BCET Gurdaspur is going to publish its Annual College Magazine BCETIAN 2019-20. It is the platform in which faculty, staff members, and students can express their talents in writing various articles. I express my sincere appreciation to all the authors who have contributed their articles in this edition of the College Magazine.

I also congratulate The Editorial Team of the College who have done sincere efforts to prepare this issue of College Magazine.

> (Dr. Dilbag Singh) Dean (Admin) and Officiating Director









At the outset, I extend my sincere greetings to the Editorial Board for providing a platform for this interaction through this magazine. I believe this magazine will provide a great benchmark for continued improvement in overall development of the college by being the good source of interaction between faculty, staff and students. I wish all the students the very best of everything for their coming life. College magazine is a milestone that marks our growth by unfolding our imaginations, thoughts and aspirations. It unleashes a wide spectrum of creative skills ranging from writing to editing and even in designing the magazine. I congratulate to all whosoever have contributed in whatever manner for the outcome of this wonderful magazine.

> (Dr. Ajay Kumar) Registrar









This College Magazine BCETIAN 2019-20 is a medium to provide proper acknowledgement and respect to all of these efforts and its results. The purpose of this college magazine is to unlock the potential within the students as well as to help them for self-motivation. I along with my editorial team members have spent much time and efforts to make this magazine stand out. We have made an attempt to bring out the talent concealed within our faculty, staff and student community. The editorial board is looking forward to make this magazine a vehicle for BCET community to express their innermost thoughts that exhibits the technical as well as literary skills.

I would like to thank our worthy Director Dr. T.S. Sidhu, Dr. Dilbag Singh and all my editorial team members for helping me to pull this through. I express my gratitude to all the authors of the articles in this magazine. Willingness to share knowledge with fellow has made this magazine possible! I hope you will enjoy reading this issue as much as we have enjoyed making it.



(Dr. Gurpadam Singh) Editor-in-Chief

## BCETIANS 2019-2020



01-16

CONTENTS

## **ENGLISH SECTION**

WHY ENVY THE ENVIRONMENT?	5
SUCCESS MANTRAS- GOLDEN STEPS FOR SURE SUCCESS	6
PHYTOREMEDIATION	7
REMEMBER WOMAN !!	8
MOTHER NATURE HEALS AMIDST LOCKDOWN	9
ARTIFICIAL INTELLIGENCE	10
LAUGHTER IS THE BEST MEDICINE	12
HOPE: THE LESSON FROM WARRIORS.	13
INDIAN ECONOMY: FROM 3.8 TO 7.8	14
FROM THE 1st DAY TO THIS DAY OF COLLEGE	15

## PUNJABI SECTION

ਮੇਰੀ ਮਾਂ ਬੋਲੀ	19
ਸ੍ਰੀ ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਜੀ	19
ਅਹਸਾਨ ਜਾ ਨੁਕਸਾਨ	20
ਕਰੋਨਾ ਹਮਲੇ ਤੇ ਅਧਆਿਤਮਿਕ ਸੁਨੇਹਾ	20
ਦ੍ਰਿੜ ਇੱਛਾ ਸ਼ਕਤੀ ਅਤੇ ਕੋਵਡਿ-19 ਮਹਾਂਮਾਰੀ	21
ਘਰ ਸੁਖ ਵੱਸਿਆ ਬਾਹਰਿ ਸੁਖ ਪਾਇਆ	22
ਮਾਂ-ਬਾਪ	22
ਮੇਰਾ ਦਿਲ ਕਰਦਾ	23
ਪੰਜਾਬੀ ਸੱਭਿਆਚਾਰ	24
ਅਲਫਾਜ਼	24
ਨੂਰ ਨਾਨਕ	25
ਵਿਕਾਸ ਅਤੇ ਵਿਨਾਸ਼	25
ਗੁਲਵਾਨ ਘਾਟੀ ਦੇ ਮਹਾਨ ਹੀਰੋ	26
ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਜੀ	27
ਬਾਬਾਨਾਨਕ	28

## 17-28

# BCETIANS



29-34

35-64

31

31

32

CONTENTS

# HINDI SECTION

फिर छिड़ी रात बात फूलों की रौनक पुरानी कुछ रह तो नहीं गया? मुक्तक वक़्त

## **TECHNICAL SECTION**

**ARTIFICIAL INTELLIGENCE** 37 THE CIVIL ENGINEERS AUTOMATION: MACHINE VS MAN THE BLACK DAY: 14th FEB. 2019 PULWAMA ATTACK 41 DIVING INTO FUTURE: A.R. & V.R. 42 ELECTRONIC VEHICLE REVOLUTION CORBA TECHNOLOGY MACHINE LEARNING 48 SOPHIA: FIRST HUMANOID ROBOT 49 WORM HOLE HOPE: THE LESSON FROM WARRIORS DOS ATTACK 52 NATURE AND TECHNOLOGY ARE MERGING 53 SYNTHETIC EVOLUTION: MANIPULATION OF GENES AND GENOMES 54 TO UNDERSTAND THE EVOLUTION OF GENE EXPRESSION **BLACK HOLE REMEMBER WOMAN!!** 57 **CORONAVIRUS COVID-19** HUMANITY ON ACHIEVING THE TECHNOLOGY OF STARS: NUCLEAR FUSION 59 **BIOTECHNOLOGY: TO THE FORE** 62 SUN AND LIGHT **ART WORK** 







## BCETIANS 2019-2020

## Editors: Dr. J.K. Behl Sh. Vishal Mahajan

## English Section

## BCETIANS-2020





It gives immense pleasure to be a part of magazine BCETIANS. The contribution and dedication of faculty members, students and non-teaching staff of Beant College of Engineering & Technology is continuously helping the magazine in stepwise manner for achieving new mile stone. The magazine provides a perfect platform to highlight the literary and artistic segments of the BCET family. The purpose of this college magazine is to unlock the hidden potential within the students and helped the students for self motivation.

I want to extend our sincere thanks to our editorial team for the support to make this magazine stand out.

The editorial board welcomes the comments and suggestions to improve the quality of magazine but cannot make assurances about the use of provided material.

I am pleased to say that the management & staff is excellent & do not hesitate to put in their best in all college activities & up-gradation.

I would like to thank students, teaching & non-teaching staff for your kind & continued support in the progress of this Institution. May Almighty God shower his choicest blessings upon all.

Dr. J.K. Behl Editor, English Section

## English Section

## BCETIANS-2020



It gives us immense joy and satisfaction to finally re-introduce our very own college magazine Just like the gods and the asuras churned the ocean of milk to extract the nectar, we have tried to churn out creativity from this mess of science. A lot of effort has gone into the making of this issue. We hope you enjoy reading the magazine. The best thing about this issue is that it represents the creative side of BCET students to a fair degree-something that we think we all need to reconnect with. Amidst the busy schedule of a 6-month semester, with 3-exams, surprise quizzes and all those assignments and problem sheets that make you want to bang your head on the wall, we tend to lose track of all the other simpler things that we are capable of, things that we could have been proud of, that can bring one satisfaction. So this time we have made an attempt to bring out the talent concealed within our student community. This issue includes articles, poems, anecdotes, art-works, a host of other things and also a parody. We hope you enjoy reading this issue as much as we have enjoyed making it.

The essential purpose of BCET Magazine is to inform, engage, inspire and entertain a diverse readership -- including alumni, faculty, staff, students, parents and other friends of Beant College -- by presenting an intimate, timely and honest portrait of the College -- its people, its programs, its history, its challenges, its resources and its mission. In the originality of its conception, in the excellence of its writing and visual presentation and in its commitment to accuracy, healthy discourse and editorial balance, the magazine endeavors to reflect the values and the quality of the institution itself. By maintaining the respect and interest of its readers, the magazine aspires ultimately to inform their opinion of the College and to strengthen their commitment to its welfare.

> Sh. Vishal Mahajan Editor, English Section

## English Section







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#### WHY ENVY THE ENVIRONMENT?

An environment is the natural world that surrounds us. It is very important to keep it taintless for a healthy ecosystem to prevail. However, environmental pollution has become one of the biggest threats facing our planet. Pollution endangers our existence and destroys our living environment. The future will either be green or not at all.

Human beings are considered to be the most intelligent creatures on Earth who are able to learn new things in the universe which can lead them to technological advancement. It goes without saying that there are many benefits in technological development for the economy but it also destroys our environment gradually. We develop technologies and science in order to make our life better but we do not fall to thinking that it can ruin everything that surround us in the near future. The destructive human activities cause several adverse effects on environment. The effects of pollution are devastative. Let us discuss some facets of the ever-growing environmental pollution.

Water pollution is one of the pivotal problems nowadays. Lots of factories and mills discharge untreated industrial waste and other unsafe substances into the water bodies directly. Water is also polluted by fertilizers and pesticides which are widely used in agriculture. The contamination of the living environment leads to the deaths of the entire natural ecosystems. There are many solutions to garbage utilization but most of the poor countries just don't have enough money to introduce such advanced technologies.

Air pollution is another challenge we face. The air we breathe become contaminated because of harmful vehicular and industrial effluents. Burning fossil fuel releases nitrogen oxides, sulphur dioxide, carbon monoxide. It causes Global warming in which radiation is absorbed while heat prevented from escaping. Our environment also suffers from noise pollution which has negative effects on people and wild species.

Environmental pollution is affecting our lives physically, emotionally, socially and economically. It has become a major issue worldwide which cannot be solved by the effort of one. Every person on our planet should take a little step to save our environment and maintain its originality. We should reduce water wastage, save energy, use rechargeable batteries, reuse our old things in new ways, and discard wastes properly. We should stop polluting and challenging our natural resources to ensure sustainable living conditions for our future generations. The usage of non-conventional sources of energy should be encouraged. Restriction on the use of fossil fuels and pollution control laws should be imposed strictly. We have to control the emission of greenhouse gases strictly to save our environment from the threat of Global warming. The concept of smart dustbins with waste segregation technique is also exciting.



CODATIVE CONTRACTOR

The remarkable growth of technological progress has had negative impact on the ecological state of our planet. It has resulted in serious environmental problems that call for radical actions. Nowadays, а lot of international summits and conferences are being held to deal with recycling, waste treatment, and water and soil contamination. We should remember that always environmental pollution is an incurable disease. It can only be prevented. So, let's take care of the world that surrounds us!

> Mohit URN: 1901257 CRN: 1064/19 CSE, 1<sup>st</sup> Year



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#### SUCCESS MANTRAS- GOLDEN STEPS FOR SURE SUCCESS

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We are Living in a world Of cut throat Competition. Every day is striving hard to outshine others to go success in the Respective field. Getting success has Become the only goal for all the people They are craving to get it anyhow-by Hook or by crook.

Short-cuts are favorites for many of them. But they don't know that success obtained Using unfair means will inevitably elude them. There are many people who don't taste success Despite their best efforts, these unlucky keep cursing themselves, their luck and Circumstances.

They don't find way out. In this article, We are giving you some steps which may lead you to sure success in life. These are The steps followed by all the great men And women of the world. Now it's your Turn to follow them.....

> Subham Kumar Mechanical Engg., 6<sup>th</sup> Sem.





#### **PHYTOREMEDIATION**

Heavy metals are among the contaminants in the environment. Beside the natural activities, almost all human activities also have potential contribution to produce heavy metals as side effects. Several methods are already being used to clean up the environment from these kinds of contaminants, but most of them are costly and far away from their optimum performance. The chemical technologies generate large volumetric sludge and increase the costs, chemical and thermal methods are both technically difficult and expensive that all of these methods can also degrade the valuable component of soils. Recent concerns regarding the environmental contamination have initiated the development of appropriate technologies to assess the presence and mobility of metals in 2 International Journal of Chemical Engineering soil, water, and wastewater. Presently, phytoremediation has become an effective and affordable technological solution used to extract or remove inactive metals and metal contaminated pollutants from soil. Phytoremediation is the use of plants to clean up a contamination from soils, sediments, and water. This technology is environmental friendly and potentially cost effective. Many species of plants have been successful in absorbing contaminants such as lead. cadmium, chromium, arsenic, and various radionuclides from soils. One of phytoremediation categories, phytoextraction, can be used to remove heavy metals from soil using its ability to uptake metals which are essential for plant growth (Fe, Mn, Zn, Cu, Mg, Mo, and Ni). Some metals with unknown biological function (Cd, Cr, Pb, Co, Ag, Se, Hg) can also be accumulated. according the Generally, to above researchers, phytoremediation is defined as an emerging technology using selected plants to clean up the contaminated environment from hazardous contaminant to improve the environment quality. Mechanisms in phytoremediation involves phytostabilization, rhizodegradation, rhizofiltration. phytodegradation, and phytovolatilization. The root plants exudates to stabilize, demobilize and bind the contaminants in the soil matrix, thereby reducing their bioavailability. These all are called as phytostabilization process. Certain plant species have used to immobilize contaminants in the soil and ground water through absorption and accumulation by roots, adsorption onto roots, or precipitation within the root zone. This process is for organics and metals contaminants in soils, sediments, and sludges medium. Specific absorb plant species can and hyperaccumulate metal contaminants and/or excess nutrients in harvestable root and shoot tissue, from the growth substrate through







phytoextraction process. This is for metals, metalloids, radionuclides, nonmetals, and organics contaminants in soils, sediments, and sludges medium. Phytovolatilization process is the plants ability to absorb and subsequently volatilize the contaminant into the atmosphere. In phytoremediation, the root zone is of special interest. The contaminants can be absorbed by the root to be subsequently stored or metabolised by the plant. Degradation of contaminants in the soil by plant enzymes exuded from the roots is another phytoremediation mechanism. For many contaminants, passive uptake via microspores in the root cell walls may be a major route into the root, where degradation can take place. Heavy metals uptake, by plants using phytoremediation technology, seems to be a prosperous way to remediate heavy metals-contaminated environment. It has some advantages compared with other commonly used conventional technologies. Several factors must be considered in order to accomplish а high performance of remediation result. The most important factor is a suitable plant species which can be used to uptake the contaminant. Even the phytoremediation technique seems to be one of the best alternative, it also has some limitations. Prolong research needs to be conducted to minimize this limitation in order to apply this technique effectively.

**REMEMBER WOMAN!!** 

Remember, Woman, you were born life giver, miracle creator, magic maker. You were born with the heart of a thousand mothers, open and fearless and sweet. You were born with the fire of Queens and conquerors, warrioress blood you bleed. You were born with the wisdom of sages and shamans, no wound can you not heal. You were born the teller of your own tale, before none should you kneel. You were born with an immeasurable soul reaching out past infinity. You were born to desire with passion, abandon. and to name your own destiny. Remember, Woman, remember you are more than you can see. Remember, Woman, remember you are loved endlessly. Remember, Woman, your power, and grace, the depth of your deep sea heart. Never forget you are Woman, divine, as you have been from the start.

> Sakshi Mahajan URN: 1701938 Biotech, 3<sup>rd</sup> Year

Ranveer Sharma UNR 1701935 BioTech, 3<sup>rd</sup> Year







#### **MOTHER NATURE HEALS AMIDST LOCKDOWN**

Azure skies, clean water bodies, sparkling snow, golden beaches, green mountains and a light breeze-COVID-19 is over and the earth has healed.

Too good to be true? Not really.

The only cause of degradation of Mother Nature is us, all of us.

The earth has been healing itself while we stay locked down in our houses. There are reports of Ganges water being sparkling clean, the Himalayas being visible from towns in Punjab, ozone layer sealing, air quality index improving significantly, birds singing in our cities, flamingos flocking Mumbai, animals coming out of hiding and roaming on the streets across various towns, Venice streams running clear and many more.

While it is debatable whether this is an outcome of the coronavirus pandemic only, it is safe to assume that at least partially it is. And hence, if all it took for the earth to heal was a month and half of no human intervention, it shows the power nature possesses to make things right; and the power humans possess to just make them wrong.

As we grapple with the lives we have been pushed into, let's take this time to also plan on what we will do after things normalize. If nature has healed itself in this specific period of time, then it is our duty to maintain its purity without any compromise. Not only government but individual should also contribute towards preserving nature in its purest form by reducing pollution and try to go green. Evidently, Mother Nature is reacting positively to the global lockdown. Without us humans in the way, nature is thriving. It would be wise to not disrespect Mother Nature. This planet is all we have.

> Uday Karanbir Singh URN: 1702203 Mechanical Engg., 6<sup>th</sup> Sem.



Nandini URN: 1702016 CSE, 3rd Year







#### **ARTIFICIAL INTELLIGENCE**

With the fast growing world AI is becoming part of all of our lives, nowadays we hear every application/software quoting "powered by AI", the social networking apps, the photo editing apps, games even music players. Now the first question arises what is AI.

Al is a computer program. How we human beings can learn by observing things, similarly machines too learn from surroundings and are able to think on their own. The word Artificial Intelligence comprises of two words "Artificial" and "Intelligence". Artificial refers to something which is made by human and Intelligence means ability to understand or think. It is the study of how to train the computers so that computers can do things which at present human can do better.

**Understanding Artificial Intelligence** 

When most people hear the term artificial intelligence, the first thing they usually think of is robots. That's because big-budget films and novels weave stories about human-like machines that wreak havoc on Earth. But nothing could be further from the truth.

Artificial intelligence is based on the principle that human intelligence can be defined in a way that a machine can easily mimic it and execute tasks, from the most simple to those that are even more complex. The goals of artificial intelligence include learning, reasoning, and perception. As technology advances, previous benchmarks that defined artificial intelligence become outdated. For example, machines that calculate basic functions or recognize text through optimal character recognition are no longer considered to embody artificial intelligence, since this function is now taken for granted as an inherent computer function.

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Al is continuously evolving to benefit many different industries. Machines are wired using a cross-disciplinary approach based in mathematics, computer science, linguistics, psychology, and more.

**Roots of Artificial Intelligence** 

Less than a decade after breaking the Nazi encryption machine Enigma and helping the Allied Forces win World War II, mathematician Alan Turing changed history a second time with a simple question: "Can machines think?"

Turing's paper "Computing Machinery and Intelligence" (1950), and it's subsequent Turing Test, established the fundamental goal and vision of artificial intelligence.

At it's core, AI is the branch of computer science that aims to answer Turing's question in the affirmative. It is the endeavor to replicate or simulate human intelligence in machines.

The expansive goal of artificial intelligence has given rise to many questions and







debates. So much so, that no singular definition of the field is universally accepted. Applications of Artificial Intelligence

The applications for artificial intelligence are endless. The technology can be applied to many different sectors and industries. Al is being tested and used in the healthcare industry for dosing drugs and different treatment in patients, and for surgical procedures in the operating room.

Categorization of Artificial Intelligence

Artificial intelligence can be divided into two different categories: weak and strong. Weak artificial intelligence embodies a system designed to carry out one particular job. Weak AI systems include video games such as the chess example from above and personal assistants such as Amazon's Alexa and Apple's Siri. You ask the assistant a question, it answers it for you.

Strong artificial intelligence systems are systems that carry on the tasks considered to be human-like. These tend to be more complex and complicated systems. They are programmed to handle situations in which they may be required to problem solve without having a person intervene. These kinds of systems can be found in applications like self-driving cars or in hospital operating rooms.

#### What is machine learning?

While learning through artificial intelligence many people gets confused by the term machine learning .There is a broad body of research in AI, much of which feeds into and complements each other. Currently enjoying something of a resurgence, machine learning is where a computer system is fed large amounts of data, which it then uses to learn how to carry out a specific task, such as understanding speech or captioning a photograph.

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"Artificial intelligence is a set of algorithms and intelligence to try to mimic human intelligence. Machine learning is one of them, and deep learning is one of those machine learning techniques."

#### Example:

Take an example of a music application like gaana / spotify etc. Now a new song releases, how will they know if you will like it or not and whether they should show it in your recommended list or not.

Attempted Solution: Every song will be divided in various categories like bass, tone, intensity, tempo, singer, etc and a graph may be plotted as below

Suppose song A releases and it has tempo/intensity ratio somewhere between green dots, the application will show it in your recommended list.

Similarly song B releases and its tempo/intensity ratio is somewhere between red dots, application will not show in your recommended list.

What happen when the song parameters falls outside these boxes?

In this case we may apply algorithm which shows weather it is nearer to green dots or red dots. The algorithm shows it is near to 4 green dots and one red dots, so the user may like this song also.







Why we should be preemptive while developing AI?

As seen partially with smartphones and other technology already, humans can become too dependent on AI and lose their mental capacities. Machines can easily lead to destruction, if put in the wrong hands .AI as robots can supercede humans, enslaving us. Recently in 2017 Facebook abandoned an experiment after two artificially intelligent programs appeared to be chatting to each other in a strange language only they understood.

At last, I just want to say that we should be very careful while developing these technologies because this can change our world beyond our imagination and can also became biggest threat of Humanity just like the movie "Matrix Trilogy" because everyone knows and understand this that everything comes with its own pros and cons.

> Rashmi Raj U. Roll No.: 1801286 CSE (B), 2<sup>nd</sup> Year

#### LAUGHTER IS THE BEST MEDICINE

Ι. "Laugh and the worlds laughs with you, cry you cry alone". As the saying goes, why should we remain alone the vast crowded world. Laughter is the best policy. Laughter decreases stress hormones and increases immune cells and infection fighting antibodies.

Laughter is a physical expression of humor and joy that has numerous protective quantities. So, when we smile we feel light and fresh. All tensions fly away. Laughter is known to be the best medicine and science has proved it. If you learn to see the funny side of things, nothing can dishearten you.

II. Laughter is safe release of tensions. A person must pass all the tests in life with a smile on his face. One must try to become humorous by reading humorous books and stories. One should share one's jokes and titbits with other. This will happen in the release of the tension because happiness shared is happiness doubled. Laughter always wins you friends. Those who take life lightly and laugh the burdens off are liked by all. We must make use of laughter to our full advantage and become tension free and bubble with happiness. Happiness keeps all our health problems at bay. That's why "laughter is the best kind of medicine and it is free of cost.

III. Laughter strengthens your immune system, boosts mood, diminishes pain and protects you from damaging effects of stress. Nothing works faster or more dependably to bring your mind and body back into balance than a good laugh.

IV. Laughter benefits the mental health like adds joys and zest to life, Eases anxiety and tension, Relieves stress, Improves mood and strengthen resilience.

> **Hitesh Sansanwal** URN: 1702148 B.Tech., 3<sup>rd</sup> Year







#### HOPE: THE LESSON FROM WARRIORS.

When you recover, what will you do? When you recover, will you still be you? Will you be stronger, will you be new, When you recover from what you've been through?

Can life get better than it was before? Will you realize your dreams and improve your score? Will people still remember your name, Or will they forget you because they're ashamed?

Life in recovery may not be the same. The rules may have changed in this brand new game. You can pick up the pieces and make a new start, And courage and hope keep you from falling apart.

The world all around you seems different and changed. Things that once were now seem out of range, But you can recapture your life and fulfill The dreams that were lost when you took ill.

The journey to wellness takes time and is long, And those that get well are exceptionally strong. For depression can kill, but you have survived. Your goal to recover has kept you alive.

Now you're recovered, what will you do? You suffered and conquered and saw it through. Back from the black and abyss of despair, It is time to move on; it is time to care!

> Kanika sharma URN: 1701926 Biotech, 3<sup>rd</sup> Year





#### **INDIAN ECONOMY: FROM 3.8 TO 7.8**

The Indian economy is a system in which the decisions regarding investment, production and distribution are done by observing the price put forth by the demand and supply forces. Our economy is the world's fifth largest by nominal GDP with a current GDP of \$2.936 trillion and third largest by purchasing power parity with \$11.326 trillion. All these facts and figures discussed above give us an essence of our present economical state but was the position of Indian economy always like this?

Well when we take a look at the history of our country's economic health, we discover that the Indian economy had a very deplorable past. The absence of proper economic policies and protectionist economics policies were some of the reasons for such lame condition of our economy. Another reason is the collapse of the Soviet Union and the Gulf war or the cold war crisis during early 1990s. The collapse of Soviet Union significantly impacted Indian economy resulting into inflation, unemployment and poverty and significantly low foreign exchange reserves. All these things made the Indian government to take a huge step in framing the economic policies. And under the supervision of Prime Minister Narashimha Rao's government the huge step of liberalization was undertaken in 1991. This marked a new dawn in the sphere of Indian economy.

The new trade reforms were framed by the then finance minister, Dr Manmohan Singh. The

reforms framed by Dr Manmohan Singh outlined that large-scale fiscal adjustment was needed but the poor should be protected from the burden of the adjustment. These economic reforms brought about expansion of the service sectors helped largely by a liberalized investment and trade regime. They also increased consumer choices and reduced poverty significantly. These reforms of 1991 increased foreign direct investment and India's expertise in information technology. The combination of foreign direct investment and India's expertise in information technology helped create thousands of jobs. This in turn created increased domestic consumption and that resulted, again, in more foreign direct investments to meet the demand of Indian consumers.

The last phase of growth came from a growing IT industry. India became a hub for IT industries and knowledge-based economy. Because of a highly talented workforce and of improved protection intellectual properties, many western firms shifted their R&D to India. Indian economy is now supported by its own expertise in information technology, larger capital market, improving infrastructure.

Finally, India has joined the club of trillion-dollar economy, but this is not the end. India still needs a second reform in its path of speeding up the economy. Some measures that we can come up with are as follows: privatization of government-owned businesses, improved







financial and legal system to protect investment and modernize its infrastructure. It is also important to introduce business friendly trade reforms, upgrade labour laws to the international level and eliminate bureaucracy to attract more international corporations with more investment.

But wait... is this economic growth beneficial for everyone in the country? Is everyone enjoying this economic growth evenly; as far as I'm concerned, we still have more than 40 percent who live on a little more than \$1.00 per day and more than 25 percent who live below the national poverty line. The government should pay a close attention so that every single person in the country enjoys the economic growth. Necessary steps should be taken to reduce inequalities. The government should promote the manufacturing sector for future economic growth, in order to reduce dependency on IT and the service industry, and divert future investment to rural areas to decrease urbanization and increase employment in small towns and villages.

A diversity in the strategies like this would compel the government to invest more money in rural infrastructure and other basic public services such as electricity, sanitation, and clean drinking water to support manufacturing facility as well as people living in that vicinity. People living in rural areas are now aware of economic progress and it is important to include people who weren't the part of this journey.

> Saurabh Kumar URN: 1901283, CRN: 1090/19 CSE, 1<sup>st</sup> Year

#### FROM THE 1<sup>st</sup> DAY TO THIS DAY OF COLLEGE

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On the very first day of college I was quite nervous about how everything would go but eventually it went really great. There was an Orientation ceremony that's been organized for us where various professors whole heartedly welcomed us in the college, one of the great speakers was respected professor of Mechanical Department, who was the one who i met with my father on the day of admission. He spoke so great that i got fond of him since that day as i really admired the Punjabi and English speech he gave in that ceremony. Then the next day I got to know that he is our lecturer for Mechanics. I was happy as I wanted my father to be proud in case my father would ask him how I'm doing, he would remember me by my name. And I remember little by little i felt my this daydream being fulfilled when he said in the entire class that I'm really proud of your class that along with academics you guys are doing good in these societies and stuff and while saying this he was looking at me and i was making that " i don't know what you are talking about" face and he said "yes, i am talking about you, I've seen your name on the notice board" and I was the happiest person that day.

Then that semester was moving towards its end and on the very last lecture sir wanted us to share stuff about college with him. It was a beautiful teacher-student interaction and we were talking about subjects, goals, future plans,





motivation, college experiences, and along with all these he, on the very last day, said "I'll always remember your name , there was a serial with this name nah, Kavyanjali". Everyone was laughing and everything was so funny and awesome that day and somewhere seeing these laughs and smiles I saw my daydream that's been fulfilled and felt like the universe is with me that i am getting answer to the question that arose in my mind the first day. Then, there was another lecturer who i wholeheartedly respect, a Madam who is assistant professor in Mathematics.

In my entire college life, the most amazing time in the most disciplined way I have spent under her guidance. She makes her students work harder and tries to make them at least try studying. She used to take all the lectures, used to take tutorials, give us proper assignments and made us study more than sufficient in the college itself. I am blessed that she taught me and made me better than i used to be. All the teachers who have taught us were so helpful and I have chosen Computer Engineering under my uncle's guidance as he was a student of our college and was working in Wipro and my aunt in Private University. So, I had to listen to them and I started pursuing B.Tech in Computer Science Engineering when I didn't know any language earlier and I've studied computer till 10th only. I was nervous that how would I cope with all these students then for C++, Assistant Professor Madam form computer science department used to take our lectures and I was grasping everything very clearly with others. Her nature and way of teaching is just amazing and her aura is so positive that it is not just a saying it actually suits her. "Her presence makes the aura positive and learnable". This was all about 1st semester, I can go on and on with it but I just want to give a single page article as I'm a writer (bedroom writer, if that word exists) but this is my 1st article that I'm giving for a magazine. All the teachers were really helpful and amazing but respected HOD sir will always be special to me as he used to guide us and made us better along with the academic teaching, I am fond of his way of teaching, he is so understanding and interacted with students in the best possible way. Earnings are yet to make let me conclude it with my college learnings. I've made a lot of friends, be it good or not but I am more of a people's person. I like to talk to new people, know about them especially who're not like me. I like and tend to know about everything happening around me and in college too I've got a number of friends be them good or bad, made me happy or sad, there are no regrets. College life till date has been amazing and taught me great things. There is still much more to thrive till then somehow survive (tried to make it rhyme). I've learnt that life would be amazing if we don't get affected by what others do to us coz they do what they feel like doing and we getting affected by that suggests that we are weak and they've the remote to control us and our emotions. Only "I" should have the remote to control me. So, be good to others irrespective of how they're to you and let's altogether bring Satyug back (Ahem Brahmasmi).

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Kavya Puri CSE, 6<sup>th</sup> Sem.







# ਪੰਜਾਬੀ ਭਾਗ



## **BCETIANS** 2019-2020

# ਸੰਪਾਦਕ: ਸ. ਸੁਰਿੰਦਰ ਸਿੰਘ

## **Punjabi** Section

## BCETIANS





ਅੱਜ ਸਾਡੇ ਲਈ ਵਿਸ਼ਵੀਕਰਨ ਦਾ ਮਤਲਬ ਆਪਣੀ ਹੋਂਦ ਤਿਆਗ ਕਿ ਦੁਨੀਆ ਦੀ ਭੀੜ ਵਿੱਚ ਇਕੱਠੇ ਹੋਣਾ ਨਹੀਂ ਸਗੋਂ ਆਪਣੀਆਂ ਸਥਾਨਕ ਚਨੌਤੀਆ, ਜਰੂਰਤਾਂ, ਪ੍ਰਾਪਤੀਆਂ ਨੂੰ ਲੈ ਕੇ ਬਰਾਬਰੀ ਦੇ ਆਧਾਰ ਤੇ ਵੰਨ ਸੁਵੱਨੇ ਵਿਸ਼ਵ ਭਾਈਚਾਰੇ ਦਾ ਹਿੱਸਾ ਬਣਨਾ ਹੈ।

ਜ਼ੇ ਦਰਵਾਜਿਆ ਤੇ ਦਸਤਕ ਹੁੰਦੀ ਰਹੇ ਇਹ ਵਸਦੇ ਘਰਾ ਦੀ ਨਿਸ਼ਾਨੀ ਹੁੰਦੀ ਹੈ ਕਾਫਲੇ ਜੇ ਚਲਦੇ ਰਹਿਣ ਤਾਂ ਰਸਤੇ ਬਣਦੇ ਰਹਿੰਦੇ ਹਨ। ਯਤਨਸ਼ੀਲ ਰਹਿਣਾ ਮਨੁੱਖ ਦਾ ਕੁਦਰਤੀ ਸੁਭਾਅ ਹੈ ਜਿਵੇਂ ਹਵਾ ਪਾਣੀ ਜਿਉਂਦੇ ਰਹਿਣ ਲਈ ਜਰੂਰੀ ਹਨ, ਜਦੋਂ ਆਦਮੀ ਹਵਾ ਅਤੇ ਪਾਣੀ ਪੱਖੋ ਸੁਰਖਰੂ ਹੋ ਜਾਂਦਾ ਹੈ ਤਾਂ ਉਹ ਭੋਜਨ ਲਈ ਤਾਂਘਦਾ ਹੈ ਜਦੋਂ ਭੋਜਨ ਮਿਲ ਜਾਵੇ ਤਾਂ ਮਨੁੱਖ ਸਿਰ ਉਪਰ ਛੱਤ ਲਈ ਕੋਸ਼ਿਸ਼ ਕਰਦਾ ਹੈ। ਜਦੋਂ ਮਨੁੱਖ ਦੀ ਮੁਢਲੀਆਂ ਲੋੜਾਂ ਪੂਰੀਆਂ ਹੋ ਜਾਂਦੀਆਂ ਹਨ ਤਾਂ ਉਹ ਆਪਣੀਆਂ ਭਾਵਨਾਵਾਂ ਨੂੰ ਅੱਖਰਾਂ ਦਾ ਰੂਪ ਦਿੰਦਾ ਹੈ। ਭਾਵਨਾਵਾਂ ਤਾਂ ਹਰੇਕ ਮਨੁੱਖ ਵਿਚ ਹੁੰਦੀਆਂ ਹਨ ਪਰ ਉਨ੍ਹਾਂ ਨੂੰ ਸ਼ਬਦਾ ਦਾ ਰੂਪ ਦੇਣਾ ਕਿਸੇ ਕਿਸੇ ਦੇ ਹੀ ਹਿੱਸੇ ਆਉਂਦਾ ਹੈ।

ਇਸ ਮੈਗਜ਼ੀਨ ਵਿਚਲੇ ਲੇਖ, ਨਿਮਰਤਾ ਸਹਿਤ, ਰੁਕਿਆ ਹੋਇਆ ਨੂੰ ਚੱਲਣ ਦਾ ਸੁਨੇਹਾ ਹਨ ਅਤੇ ਜਾਗਦਿਆਂ ਨੂੰ ਅੱਖਾਂ ਖੋਲ ਕਿ ਸੁਪਨੇ ਦੇਖਣ ਲਈ ਸੱਦਾ ਹੈ।

ਕੁਦਰਤ ਨੇ ਹਰੇਕ ਮਨੁੱਖ ਅੰਦਰ ਕੋਈ ਨਾ ਕੋਈ ਵਿਲੱਖਣ ਪ੍ਰਤਿਭਾ ਛੁਪਾ ਰੱਖੀ ਹੈ ਇਸ ਮੈਗਜੀਨ ਨੂੰ ਛਾਪਣ ਦਾ ਉਦੇਸ਼ ਵਿਦਿਆਰਥੀਆਂ ਅੰਦਰ ਛੁਪੀ ਹੋਈ ਪ੍ਰਤਿਭਾ ਤੋਂ ਜਾਣੂ ਕਰਾਉਣ ਲਈ ਇਕ ਨਿਮਾਣਾ ਜਿਹਾ ਯਤਨ ਹੈ ਤਾਂ ਜੋ ਉਹ ਆਪਣੀਆਂ ਸੰਭਾਵਨਾਵਾਂ ਨੂੰ ਪਛਾਣ ਸਕਣ ਅਤੇ ਸ਼ਬਦਾ ਨੂੰ ਅਰਥ, ਅਰਥ ਨੂੰ ਰਸ, ਤੇ ਰਸ ਨੂੰ ਸੁਹਜ ਬਣਾਉਣ ਨੀਵੇ ਨੂੰ ਉਚੇ ਅਤੀਤ ਨੂੰ ਵਰਤਮਾਨ ਨਾਲ, ਅਤੇ ਵਰਤਮਾਨ ਨੂੰ ਭਵਿੱਖ ਨਾਲ ਮਿਲਾਉਣ ਦਾ ਰਚਨਾਤਮਕ ਕਾਰਜ ਕਰਨ ਦੇ ਯੋਗ ਹੋ ਸਕਣ।

> ਸੁਰਿੰਦਰ ਸਿੰਘ ਸੰਪਾਦਕ ਪੰਜਾਬੀ ਭਾਗ

## Punjabi Section



## ਮੇਰੀ ਮਾਂ ਬੋਲੀ

ਅਹਿਸਾਸਾਂ ਤੋਂ ਪਰੇ... ਸਮਾਜ ਦੁਨੀਆ ਵਿੱਚ ਵਿਚਰਦੇ ਹੋਏ ਆਪਾਂ, ਬਿਨਾਂ ਲਫ਼ਜ਼ਾਂ ਤੋਂ ਅਧੁਰੇ ਹਾਂ....

ਲਫ਼ਜ, ਭਾਸ਼ਾ, ਬੋਲੀ ਆਪਣੀ ਜ਼ਿੰਦਗੀ ਦੀ ਰੀੜ ਦੀ ਹੱਡੀ ਨੇਂ। ਪਹਿਲਾ ਲਫ਼ਜ ਮੈਂ ਬੋਲਿਆ 'ਮਾਂ '

ਮੇਰੀ ਮਾਂ ਬੋਲੀ ਪੰਜਾਬੀ ਦੀ ਦਾਤ ਹੈ। ਪੰਜਾਬੀ ਮੇਰੀ ਮਾਂ ਬੋਲੀ, ਮੇਰੀ ਪਹਿਚਾਣ, ਮੇਰਾ ਆਤਮ-ਵਿਸ਼ਵਾਸ, ਮੇਰਾ ਸਵੈਮਾਣ, ਮੇਰਾ ਗਰੂਰ ਤੇ ਮੇਰਾ ਸਕੂਨ ਹੈ। ਮੈਂ ਮੇਰੀ ਮਾਂ ਬੋਲੀ ਬਿਨਾਂ ਅਧੁਰੀ ਹਾਂ।

ਇਨਸਾਨ ਅਹਿਸਾਸਾਂ ਦਾ ਸਮੰਦਰ ਹੈ। ਮੈਂ ਵੀ ਰੋਂਦੀ ਹਾਂ, ਹੱਸਦੀ ਹਾਂ, ਪਿਆਰ ਕਰਦੀ ਹਾਂ, ਗੁੱਸਾ, ਈਰਖਾ, ਹਉਮੈਂ ਸਭ ਭਾਵਨਾਵਾਂ, ਵਿਅਕਤ ਕਰਦੀ ਹਾਂ।ਪਰ ਇੱਕ ਗੱਲ ਦੱਸਾਂ ਤੁਹਾਨੂੰ, ਮੈਨੂੰ ਹਿੰਦੀ ਅੰਗਰੇਜ਼ੀ ਵੀ ਆਉਂਦੀਆਂ ਨੇ। ਪਰ ਜੋ ਭਾਵ ਮੈਂ ਆਪਣੀ ਮਾਂ ਬੋਲੀ ਪੰਜਾਬੀ ਵਿੱਚ ਕਰ ਪਾਉਂਦੀ ਹਾਂ, ਉਹ ਗੱਲ ਹੋਰ ਭਾਸ਼ਾਵਾ ਵਿੱਚ ਬਣਦੇ ਹੀ ਨਹੀਂ। ਪੰਜਾਬੀ ਵਿੱਚ ਸਹਿਜੇ ਹੀ ਵਿਅਕਤ ਜੋ ਜਾਂਦੇ ਨੇ ਅਹਿਸਾਸ, ਦਿਲ ਦੀ ਹਰ ਗੱਲ ਸੋਚਣਾ ਨੀ ਪੈਂਦਾ ਮੈਨੂੰ। ਮੈਨੂੰ ਬੜਾ ਮਾਣ ਹੈ ਕਿ ਮੈਂ ਪੰਜਾਬੀ ਹਾਂ। ਪੰਜਾਬੀ ਮੇਰੀ ਰਗਾਂ ਵਿੱਚ ਬਹਿੰਦੀ ਹੈ।ਬਹੁਤ ਪਿਆਰ ਤੇ ਸਤਿਕਾਰ ਮੇਰੀ ਮਾਂ ਮੇਰੀ ਮਾਂ ਬੋਲੀ ਪੰਜਾਬੀ ਨੂੰ।

> ਮਨਜੋਤ ਕੌਰ ਕੰਪਿਊਟਰ ਸਾਇੰਸ ਅਤੇ ਇੰਜੀਨੀਅਰਿੰਗ **ਜੋਲ ਨੰਬਰ: 1901253**

## ਸ਼੍ਰੀ ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਜੀ

ਸ਼ਤਿਗੁਰ ਨਾਨਕ ਪ੍ਰਗਟਿਆ ਮਿਟੀ ਧੁੰਧੂ ਜਗਿ ਚਾਨਣੂ ਹੋਆ। ਜਿਊ ਕਰਿ ਸੁਰਜੂ ਨਿਕਲਿਆ ਤਾਰੇ ਛਪਿ ਅੰਧੇਰ ਪਲੋਆ। ਸਿੰਘ ਬਕੇ ਮਿਰਗਾਵਲੀ ਭੰਨੀ ਜਾਇ ਨ ਧੀਰਿ ਧਰੋਆ। ਜਿਥੇ ਬਾਬਾ ਪੈਰ ਧਰਿ ਪੂਜਾ ਆਸਣ ਥਾਪਣਿ ਸੋਆ। ਸਿਧ ਆਸਟਿ ਸਕ ਜਗਤ ਦੇ ਨਾਨਕ ਆਦਿ ਮਤੇ ਜੇ ਕੋਆ। ਘਰਿ ਘਰਿ ਅੰਦਰਿ ਧਰਮਸਾਲ ਹੋਵੈ ਕੀਰਤਨੂ ਸਦਾ ਵਿਸੋਆ। ਬਾਬੇ ਤਾਰੇ ਜਾਰ ਜਕਿ ਨਊ ਖੰਡਿ ਪ੍ਰਿਥਮੀ ਸਚਾ ਢੋਆ। ਗੁਰਮੁਖ ਕਲਿ ਵਿਚ ਪਰਗਟੂ ਹੋਆ॥੨੭॥ (ਵਾਰ ਭਾਈ ਗਰਦਾਸ ਜੀ ਤੋਂ ਧੰਨਵਾਦ ਸਹਿਤ)

> ਨਾਵਯ ਮਹਾਜਨ ਬਾਇਓ ਟੈਕਨੋਲੋਜੀ ਰੋਲ ਨੰਬਰ: 1801199







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ਵੀ ਸਵਾਰੀਂ ਲਈ ਆਟੋ ਰੋਕ ਦਿੱਤਾ। ਜੀਵਨ ਸਿੰਘ ਧੰਨਵਾਦ ਦੀ ਨਜ਼ਰ ਨਾਲ ਮੇਰੇ ਪਿੱਛੇ ਬੈਠ ਗਿਆ, ਪਰ ਚੰਨਣ ਸਿਓ ਮਾਯੂਸ ਹੋ ਗਿਆ, ਜਿਵੇ ਮੈਂ ਉਸਦੀਆਂ ਆਸਾਂ ਵਾਲੇ ਬੂਰ ਨੂੰ ਝਾੜ੍ਹ ਦਿੱਤਾ ਹੋਵੇ। ਹੁਣ ਮੈਂ ਚਲਦੇ-ਚਲਦੇ ਡੂੰਗੀ ਸੋਚੀਂ ਪਿਆ ਸੋਚ ਰਿਹਾ ਸੀ ਕਿ ਮੈਂ ਅਹਿਸਾਨ ਕੀਤਾ ਜਾ ਨੁਕਸਾਨ।

> ਜਗਜੀਤ ਸਿੰਘ ਮਾਨ ਸਹਾਇਕ ਪ੍ਰੋਫੈਸਰ ਮਕੈਨੀਕਲ ਇੰਜੀਨੀਅਰਿੰਗ ਵਿਭਾਗ

### ਕਰੋਨਾ ਹਮਲੇ ਤੇ ਅਧਿਆਤਮਿਕ ਸੁਨੇਹਾ

ਗੱਲ ਕਰਨ ਲੱਗਾ ਦੋਸਤੋ ਮੈਂ ਉਸ ਮਹਾਂਮਾਰੀ ਦੀ ਜਿਸ ਨੇ ਜੜਾਂ ਹਿਲਾ ਕੇ ਰੱਖ ਦਿੱਤੀਆ ਜਿਸਨੇ ਦੁਨੀਆਂ ਸਾਰੀ ਦੀ ਸਾਰੀ ਪੈਸੇ ਦੀ ਭੁੱਖ ਖਤਮ ਕਰ ਦਿੱਤੀ ਤੇ ਵੱਡੇ ਵੱਡੇ ਘਰ ਬਿਠਾ ਤੇ ਨੇ, ਇਨਸਾਨ ਪਿੰਜਰੇ ਬੰਦ ਤੇ ਪੰਛੀ ਉੱਡਣ ਲਾ ਤੇ ਨੇ। ਰੱਬ ਦੇ ਰੰਗ ਨੇ ਬੰਦਿਆ ਤੂੰ ਐਵੇਂ ਨਾ ਬਣ ਸਿਆਣਾ ਤੂੰ ਉਹਦੇ ਤੋਂ ਉਪਰ ਜਾ ਰਿਹਾ, ਕਿ ਰੱਬ ਨੂੰ ਸਮਝ ਲਿਆ ਨਿਆਣਾ। ਇਹ ਸਿੱਖ ਮਿਲੀ ਬੜੀ ਵੱਡੀ ਬੰਦੇ ਨੂੰ ਕਿ ਹੁਣ ਕੁਦਰਤ ਨਾਲ ਕਰੀ ਨਾ ਖਿਲਵਾੜ ਕੋਈ। ਰੱਬ ਦੇ ਭਾਣੇ ਵਿੱਚ ਰਹਿਣਾ ਸਿੱਖੋ ਨਹੀ ਤਾਂ ਹੋ ਜਾਊ ਵੱਡਾ ਉਜਾੜਾ ਕੋਈ। ਬੰਦ ਕਰ ਦਿਉ ਖਾਣਾ ਮਾਸ ਮੱਛੀ ਮੇਰੀ ਗੱਲ ਦਾ ਹੁਣ ਪੱਖ ਲਉ ਗੱਲਾਂ ਨੇ ਸੱਚੀਆਂ। ਜੇ ਚੰਗੀਆਂ ਲੱਗੀਆਂ ਤਾਂ ਸ਼ੇਅਰ ਕਰ ਦਿਉ ਨਹੀ ਤੇ ਇਸ ਨਿਮਾਣੇ ਨੂੰ ਬਖਸ਼ ਦਿਉ।

#### ਉਜਵਲ ਰਾਣਾ S/O ਵਿਕਰਮਜੀਤ ਰਾਣਾ



ਜੀਵਨ ਸਿੰਘ ਅੱਜ ਫਿਰ ਦਿਹਾੜੀ ਦੀ ਭਾਲ ਚ ਸ਼ਹਿਰ ਆਇਆ ਸੀ। ਬਦਕਿਸਮਤੀ ਨਾਲ ਅੱਜ ਫਿਰ ਦਿਹਾੜੀ ਨਹੀਂ ਮਿਲੀ, ਨਿਮੋਝੂਣਾ ਹੋ ਕੇ ਉਹ ਕਿਸਮਤ ਨੂੰ ਕੋਸਦਾ ਹੋਇਆ ਚਿੰਤਾ ਚ ਪੈ ਗਿਆ। ਘਰ ਦੇ ਰਾਸ਼ਨ ਪਾਣੀ, ਬੱਚਿਆਂ ਦੇ ਕੱਪੜੇ, ਕਿਤਾਬਾਂ ਆਦਿ ਲਈ ਪੈਸਿਆਂ ਦਾ ਫਿਕਰ ਉਸਦੇ ਮੰਨ ਨੂੰ ਚੂੰਡੀਆਂ ਵੱਢ ਰਿਹਾ ਸੀ। ਹਾਰ ਕੇ ਠੰਡਾ ਜਿਹਾ ਹੌਕਾ ਭਰ ਕੇ ਕਹਿੰਦਾ ਚੱਲ ਮਨਾ ਚੱਲ ਘਰ ਨੂੰ ਚਲੀਏ। ਪਰ ਜੇਬ ਚ ਓਹੀ 20 ਰੁਪਏ ਹੋਣ ਕਰਕੇ ਸੋਚ ਰਿਹਾ ਸੀ ਕਿ ਕਿਤੇ ਬੱਸ ਦਾ ਕਿਰਾਇਆ ਹੀ ਬੱਚ ਜਾਵੇ। ਸੋ ਬੜੀ ਉਮੀਦ ਨਾਲ ਸੜਕ ਤੇ ਰਾਹਗੀਰਾਂ ਨੂੰ ਹੱਥ ਦੇਣਾ ਸ਼ੁਰੂ ਕਰ ਦਿੱਤਾ।

ਉਧੱਰ ਚੰਨਣ ਸਿਓ ਆਪਣੇ ਆਟੋ ਤੇ ਸਵੇਰ ਹੋ ਕੇ ਸਵਾਰੀਂ ਦੀ ਭਾਲ ਚ ਦਰ-ਦਰ ਭਟੱਕ ਰਿਹਾ ਸੀ, ਅਖੇ ਅੱਜ ਤਾਂ ਬੋਹਣੀ ਵੀ ਨਹੀਂ ਹੋ ਰਹੀ ਉੱਤੋਂ ਤੇਲ ਦਾ ਖਰਚਾ ਜਿਵੇਂ ਜੇਬ ਨੂੰ ਖੋਰਾ ਲਾ ਰਿਹਾ ਹੋਵੇ। ਅਚਾਨਕ ਉਸਦੀ ਨਜ਼ਰ ਇਕ ਸਵਾਰੀ, ਜੀਵਨ ਸਿੰਘ ਜੋ ਕਿ ਹੱਥ ਦੇ ਰਿਹਾ ਹੁੰਦਾ ਹੈ ਵੱਲ ਪੈਂਦੀ ਹੈ। ਮੰਨ ਵਿੱਚ ਆਸ ਦੀ ਕਿਰਨ ਲੈ ਕੇ ਬੜੀ ਉਤਸੁਕਤਾ ਨਾਲ ਆਟੋ ਉਸ ਵੱਲ ਰੋਕਣ ਦੀ ਕੋਸ਼ਿਸ਼ ਕਰਦਾ ਹੈ।

ਸ਼ਾਮੀ ਛੁੱਟੀ ਹੁੰਦੇ ਸਾਰ ਹੀ ਮੈਂ ਆਪਣੇ ਦਫਤਰ ਤੋਂ ਕਾਹਲੀ-ਕਾਹਲੀ ਆਪਣੇ ਮੋਟਰਸਾਈਕਲ ਨੂੰ ਘਰ ਵੱਲ ਚਾਲੇ ਪਾ ਦਿੱਤਾ। ਰਸਤੇ ਵਿੱਚ ਇਕ ਆਟੋ ਨੂੰ ਪਾਰ ਕਰਦਿਆਂ ਮੇਰੀ ਨਜ਼ਰ ਹੱਥ ਦੇ ਰਹੇ ਮੈਲੇ-ਕੁਚੈਲੇ ਕੱਪੜੇ ਵਾਲੇ ਜੀਵਨ ਸਿੰਘ ਤੇ ਪੈਂਦੀ ਹੈ। ਮੰਨ ਚ ਰਹਿਮ ਦੀ ਨਜ਼ਰ ਨਾਲ ਦੇਖਦੇ ਮੈਂ ਇਕ ਦੱਮ ਉਸਦੇ ਸਾਮਣੇ ਬ੍ਰੇਕ ਮਾਰ ਦਿੱਤੀ। ਉੱਧਰ ਚੰਨਣ ਸਿਓ ਨੇ







### ਦ੍ਰਿੜ ਇੱਛਾ ਸ਼ਕਤੀ ਅਤੇ ਕੋਵਿਡ-19 ਮਹਾਂਮਾਰੀ

ਕੀਤਾ ਹੈ। ਲੋਤੀਂਦੇ ਵੈਕਸੀਨ ਦੀ ਅਣਹੋਂਦ ਵਿੱਚ ਇਸ ਮਹਾਂਮਾਰੀ ਤੋਂ ਬਚਣ ਲਈ ਸਾਰੇ ਦੇਸਾਂ ਵਲੋਂ ਲੌਕਡਾਊਨ/ਕਰਫਿਊ ਰਾਹੀਂ ਲੋਕਾਂ ਨੂੰ ਆਪਣੇ ਘਰਾਂ ਵਿੱਚ ਰੱਖ ਕੇ ਸੰਕਰਮਣ ਦੀ ਕੜੀ ਨੂੰ ਤੋੜਨ ਦਾ ਸੁਚੱਜਾ ਯਤਨ ਕੀਤਾ ਜਾ ਰਿਹਾ ਹੈ। ਸਰਕਾਰੀ ਅਤੇ ਗੈਰ-ਸਰਕਾਰੀ ਸੰਸਥਾਵਾਂ ਦੇ ਕਰਮਚਾਰੀਆਂ ਨੇ ਵਰਲਡ ਹੈਲਥ ਆਰਗੇਨਾਈਜ਼ੇਸ਼ਨ, ਭਾਰਤ ਸਰਕਾਰ ਅਤੇ ਰਾਜ ਸਰਕਾਰ ਦੇ ਹੁਕਮਾਂ ਅਨੁਸਾਰ ਆਪਣੀ ਡਿਊਟੀ ਨੂੰ ਬਾਖੂਬੀ ਨਿਭਾਇਆ ਹੈ। ਭਾਰਤ ਦੇਸ਼ ਦੇ ਲੋਕ ਵੀ ਨਿਯਮਾਂ ਦੀ ਪਾਲਣਾ ਕਰਕੇ ਇਸ ਮਹਾਂਮਾਰੀ ਨੂੰ ਖਤਮ ਕਰਨ ਲਈ ਪੁਰਨ ਸਹਿਯੋਗ ਦੇ ਰਹੇ ਹਨ। ਧਾਰਮਿਕ ਸੰਸਥਾਵਾਂ ਨੇ ਵੀ ਗਰਬਾਣੀ ਦੇ ੳਪਦੇਸ਼ "ਵਿਚਿ ਦਨੀਆ ਸੇਵ ਕਮਾਈਐ। ਤਾ ਦਰਗਹ ਬੈਸਣ ਪਾਈਐ" ; "ਘਾਲਿ ਖਾਇ ਕਿਛ ਹਥਹ ਦੇਇ। ਨਾਨਕ ਰਾਹ ਪਛਾਣਹਿ ਸੇਇ" ਅਤੇ "ਮਾਨਸ ਕੀ ਜਾਤ ਸਭੈ ਏਕੈ ਪਹਿਚਾਨਬੋ" ਅਨੁਸਾਰ ਆਪਣਾ ਰੋਲ ਬਾਖੂਬੀ ਨਿਭਾਇਆ ਹੈ। ਇਸ ਸੰਕਟਮਈ ਸਮੇਂ ਵਿੱਚ ਇਨ੍ਹਾਂ ਸੁਹਿਰਦ ਲੋਕਾਂ ਨੇ ਆਪਣੀ ਜਾਨ ਦੀ ਪ੍ਰਵਾਹ ਕੀਤੇ ਬਿਨਾਂ ਲੋੜਵੰਦਾਂ ਦੀ ਮੱਦਦ ਕਰਕੇ ਇਨਸਾਨੀਅਤ ਨੂੰ ਜੀਵਤ ਰੱਖਿਆ ਹੈ। ਇਸ ਸਰਬੱਤ ਦੇ ਭਲੇ ਵਾਲੇ ਕਾਰਜ ਦੀ ਸਲਾਹਣਾ ਪੂਰੀ ਦੁਨੀਆਂ ਵਿੱਚ ਹੋ ਰਹੀ ਹੈ। ਇਸ ਸਾਰੀ ਪ੍ਰਕਿਰਿਆ ਵਿੱਚ ਇੱਛਾ ਸ਼ਕਤੀ ਦਾ ਪ੍ਰਦਰਸ਼ਨ ਵੱਡੇ ਪੱਧਰ ਤੇ ਹੋਇਆ ਹੈ, ਕਿਉਂਕਿ ਦ੍ਰਿੜ ਇੱਛਾ ਸ਼ਕਤੀ ਨੇ ਹੀ ਲੋੜੀਂਦੇ ਪ੍ਰਬੰਧਾਂ ਨੂੰ ਜਨਮ ਦਿੱਤਾ ਹੈ। ਉਮੀਦ ਹੈ ਕਿ ਭਾਰਤ ਦੇਸ਼ ਆਪਣੀ ਦ੍ਰਿੜ ਇੱਛਾ ਸ਼ਕਤੀ ਦੇ ਬਲਬੂਤੇ ਇਸ ਕੋਵਿਡ-19 ਮਹਾਂਮਾਰੀ ਤੋਂ ਮੁਕਤ ਹੋਣ ਵਿੱਚ ਜਰੂਰ ਸਫਲ ਹੋਵੇਗਾ। ਧੰਨਵਾਦ।

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ਡਾ. ਰਣਜੀਤ ਸਿੰਘ ਪ੍ਰੋਫੈਸਰ, ਮਕੈਨੀਕਲ ਇੰਜੀਨੀਅਰਿੰਗ ਵਿਭਾਗ







#### ਘਰ ਸੁਖ ਵੱਸਿਆ ਬਾਹਰਿ ਸੁਖ ਪਾਇਆ

ਸਿਆਣੇ ਕਹਿੰਦੇ ਨੇ ਕਿ ਭਾਨ ਜੋੜਦੇ ਰਹੋ ਤਾਂ ੱਡੀ ਰਕਮ ਵੀ ਜੁੜ ਜਾਵੇਗੀ, ਨਿੱਕੀਆਂ, ਨਿੱਕੀਆਂ ਗੱਲਾਂ ਜਿੰਦਗੀ ਨੂੰ ਸੋਹਣਾ ਬਣਾਓੁਦੀਆਂ ਨੇ, ਖੁਸ਼ ਹੋਣ ਲਈ ਕਿਸੇ ਵੱਡੀ ਗੱਲ ਦੇ ਵਾਪਰਨ ਦੀ ੳਡੀਕ ਵਿਚ ਦੁਖੀ ਮਨੁੱਖ ਖੁਸ਼ ਕਿਵੇਂ ਰਹਿ ਸਕਦਾ ਏ।

ਅੰਦਰੋਂ ਭਰਪੂਰ ਇਨਸਾਨ ਜੋ ਅਨਹਦ ਨਾਲ ਜੁੜਿਆ ਹੋਵੇ, ਇਹ ਨਹੀਂ ਸੋਚਦਾ ਕਿ ਪਹਾੜ ਦੀ ਚੋਟੀ ਤੇ ਪਹੁੰਚ ਕੇ ਖੁਸ਼ ਹੋਵੇਗਾ, ਉਹ ਉਥੇ ਪਹੁੰਚਣ ਲਈ ਕੀਤੇ ਸਫ਼ਰ ਦੌਰਾਨ ਵੀ ਵਜਦ ਵਿਚ ਰਹੇਗਾ ਨੱਚਦਾ ਗਾਉਂਦਾ ਈ ਜਾਵੇਗਾ, ਆਪਣਾ ਸਫ਼ਰ ਤਾਂ ਸੁਹਾਵਣਾ ਕਰੇਗਾ ਈ, ਨਾਲ ਦੂਜਿਆਂ ਦੀ ਥਕਾਣ ਵੀ ਲਾਹ ਦੇਵੇਗਾ।

"ਘਰ ਸੁਖ ਵਸਿਆ ਬਾਹਰਿ ਸੁਖ ਪਾਇਆ।"

ਤੇ ਘਰ ਵਾਲਾ ਸੁਖ ਸੰਗਮਰਮਰੀ ਇਮਾਰਤ ਦੇ ਅੰਦਰ ਲੱਗੀ ਮੱਖਮਲੀ ਸੇਜ ਤੇ ਪੈ ਕੇ ਹੀ ਨਸੀਬ ਹੋਵੇ, ਇਹ ਜਰੂਰੀ ਨਹੀਂ।

> ਹਰਸ਼ਪ੍ਰੀਤ ਕੰਪਿਊਟਰ ਸਾਇੰਸ ਅਤੇ ਇੰਜੀਨੀਅਰਿੰਗ ਪਹਿਲਾ ਸਾਲ

#### ਮਾਂ-ਬਾਪ

ਮਾਂ-ਬਾਪ ਤੋਂ ਬਿਨਾ ਨਾ ਹੁੰਦਾ ਗੁਆਰਾ ਆ, ਖਤਦੇ ਨੇ ਨਾਲ ਤੇ ਦਿੰਦੇ ਸਹਾਰਾ ਆ। ਸਿਖਾ ਦਿੱਤਾ ਮੈਨੂੰ, ਉਂਗਲੀ ਫੜ ਕਿਵੇਂ ਤੁਰਨਾ ਏ, ਦਸਿਆ ਮਸ਼ਕਿਲਾ ਨਾਲ ਕਿਵੇਂ ਭਿੜਨਾ ਏ। ਰੋਂਦਿਆਂ ਨੂੰ ਸਾਨੂੰ ਚੁੱਪ ਇਹੀ ਕਰਵਾਉਂਦੇ ਨੇ, ਜਿੱਥੇ ਜਾਵੇ ਨਾ ਨਾਲ ਕੋਈ, ਉੱਥੇ ਸਾਥ ਨਿਭਾਉਂਦੇ ਨੇ। ਮਾਂ ਦਾ ਪਿਆਰ ਹਰ ਦਿਲ ਨੂੰ ਏ ਛੋ ਗਿਆ ਇਸ ਪਿਆਰ ਚ ਹਰ ਪੱਥਰ ਦਿਲ ਵੀ ਏ ਨਰਮ ਹੋ ਗਿਆ। ਪਿਤਾ ਦਾ ਵੀ ਪਿਆਰ ਨਾ ਹੰਦਾ ਮਾਂ ਨਾਲੋ ਘੱਟ ਏ. ਭਾਵੇਂ ਦੇ ਦਿੰਦੇ ਝਿੱੜਕ ਹਰ ਗੱਲ ਓੱਤੇ ਝੱਟ ਏ। ਬੱਚਿਆਂ ਦੇ ਲਈ ਮਿਹਨਤ ਕਰਨ ਤੇ ਜੋਰ ਪਾਉਂਦੇ ਨੇ, ਹਰ ਮੁੰਹੋਂ ਨਿੱਕਲੇ ਬੋਲ ਨੂੰ ਪੁਗਾਉਂਦੇ ਨੇ। ਜਿੰਨਾਂ ਵੀ 'ਗੁਣਤਾਸ਼' ਲਿਖੇ ਉਹ ਘੱਟ ਲੱਗੇ 'ਮਾਪਿਆਂ' ਬਾਰੇ. ਆਖਿਨ ਜ ਬਸ ਇਹੀ ਕਹਿਣਾ 'ਮਾਂ-ਬਾਪ' ਦੀ ਇੱਜਤ ਕਰੋ ਸਾਰੇ।

> ਗੁਣਤਾਸ਼ ਕੋਰ ਕੰਪਿਊਟਰ ਸਾਇੰਸ ਅਤੇ ਇੰਜੀਨੀਅਰਿੰਗ ਰੋਲ ਨੰਬਰ:1901234







### ੇ ਮੇਰਾ ਦਿਲ ਕਰਦਾ

ਮੇਰਾ ਦਿਲ ਕਰਦਾ ਮੈਂ ਗੀਤ ਲਿਖਾਂ ਦਿਲਾਂ ਸਾਂਝਿਆ ਵਾਲੀ ਪੀਤ ਲਿਖਾਂ ਮੈਂ ਅਖਰ ਲਿਖਾਂ ਉਸ ਮਾਹੀ ਦੇ, ਬਾਜਾਂ ਵਾਲੇ ਸੰਤ ਸਿਪਾਹੀ ਦੇ ਗਿਦੜਾਂ ਤੋਂ ਸੇਰ ਬਣਾ ਦਿੱਤੇ, ਚਿੜੀਆਂ ਤੋਂ ਬਾਜ ਤੂੜਾ ਦਿੱਤੇ ਜਲਮ ਅੱਗੇ ਅੜੀ ਸਮਸ਼ੀਰ ਲਿਖਾਂ, ਮੇਰਾ ਦਿਲ ਕਰਦਾ..... ਮੈਂ ਗੀਤ ਲਿਖਾਂ ਉਸ ਬੁਲ੍ਹੇ ਦੇ, ਭੱਟੀ ਵਾਲੇ ਦੁੱਲੇ ਦੇ ਮੈਂ ਕੁਰਬਾਨੀਆਂ ਵਾਲਾ ਇਹਸਾਸ ਲਿਖਾਂ ਜਾਂ ਰਾਂਝੇ ਦੀ ਹੀਰ ਲਿਖਾਂ ਮੇਰਾ ਦਿਲ ਕਰਦਾ ਮੈਂ ਗੀਤ ਲਿਖਾਂ ਦਿਲਾਂ ਸਾਂਝਿਆ ਵਾਲੀ ਪੀਤ ਲਿਖਾਂ ਉਹ ਹਲਟ ਵਾਲੀ ਅਵਾਜ ਲਿਖਾਂ, ਤੂੰਬੀ ਡੱਫ਼ਲੀ ਵਾਲਾ ਸਾਜ ਲਿਖਾਂ ਸੋਕੇ ਵਿੱਚ ਸੜੀ ਜ਼ਮੀਨ ਲਿਖਾਂ ਜਾਂ ਟਿੰਡਾਂ ਵਾਲਾ ਨੀਰ ਲਿਖਾਂ ਮੇਰਾ ਦਿਲ ਕਰਦਾ ਮੈਂ ਗੀਤ ਲਿਖਾਂ ਦਿਲਾਂ ਸਾਂਝਿਆ ਵਾਲੀ ਪ੍ਰੀਤ ਲਿਖਾਂ ਸਰਹੱਦ ਤੇ ਡਟਿਆ ਜਵਾਨ ਲਿਖਾਂ ਜਾਂ ਫਾਂਸੀ ਚਤਿਆ ਕਿਸਾਨ ਲਿਖਾਂ ਕੁਰੱਪਸ਼ਨ ਵਾਲਾ ਨੇਤਾ ਮਹਾਨ ਲਿਖਾਂ, ਝੂਠੀ ਉਹਦੀ ਤਰੀਫ਼ ਲਿਖਾਂ ਮੇਰਾ ਦਿਲ ਕਰਦਾ ਮੈਂ ਗੀਤ ਲਿਖਾਂ ਦਿਲਾਂ ਸਾਂਝਿਆ ਵਾਲੀ ਪ੍ਰੀਤ ਲਿਖਾਂ ਸੱਭਿਆਚਾਰ ਨੂੰ ਪੈਂਦੀ ਮਾਰ ਲਿਖਾਂ, ਮਾਂ ਬੋਲੀ ਭੁੱਲਿਆ ਕਿਰਦਾਰ ਲਿਖਾਂ ਅਮੀਰ ਬੰਦਾ ਜਮੀਰੋਂ ਗਰੀਬ ਲਿਖਾਂ ਮੇਰਾ ਦਿਲ ਕਰਦਾ ਮੈਂ ਗੀਤ ਲਿਖਾਂ ਦਿਲਾਂ ਸਾਂਝਿਆ ਵਾਲੀ ਪ੍ਰੀਤ ਲਿਖਾਂ

> ਅਵਤਾਰ ਸਿੰਘ ਇੰਸਟੈਕਟਰ, ਕੇਂਦਰੀ ਵਰਕਸ਼ਾਪ





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## ਪੰਜਾਬੀ ਸੱਭਿਆਚਾਰ

ਸੱਭਿਆਚਾਰ ਕਿਸੇ ਖਾਸ ਖਿੱਤੇਂ ਦੀ ਜੀਵਨ-ਜਾਚ ਹੁੰਦੀ ਹੈ ਸੋ ਇਹ ਇਕ ਵਗਦਾ ਦਰਿਆ ਹੈ। ਇਸ ਵਿਚ ਪਰਿਵਰਤਨ ਆਉਂਦਾ ਰਹਿੰਦਾ ਹੈ।ਆਧੁਨਿਕ ਯੁੱਗ ਕਾਰਨ ਇਸ ਵਿੱਚ ਬਹੁਤ ਤਬਦੀਲੀ ਆਈ ਹੈ।ਇਸ ਨਾਲ ਰੁਚੀਆਂ,ਕੰਮਾਂ ਅਤੇ ਸੋਚ-ਵਿਚਾਰ ਆਦਿ ਵਿੱਚ ਬਦਲਾਅ ਆਇਆ ਹੈ।ਅਸੀ ਆਪਣਾ ਸੱਭਿਆਚਾਰ ਭੁੱਲਦੇ ਜਾ ਰਹੇ ਹਨ।ਕਿਉਂਕਿ ਇਸ ਨਾਲ ਸਾਡੇ ਰੀਤੀ-ਰਿਵਾਜਾ ਤੇ ਪਹਿਰਾਵੇ ਵਿੱਚ ਬਹੁਤ ਤਬਦੀਲੀ ਆਈ ਹੈ।ਪਹਿਲਾਂ ਕੁੜੀਆਂ ਸਲਵਾਰ-ਕਮੀਜ਼ ਪਹਿਨਦੀਆਂ ਸਨ ਪਰ ਹੁਣ ਜੀਨ-ਟੌਪ ਪਹਿਣ ਲੱਗ ਪਈਆਂ ਹਨ।ਪਹਿਲਾਂ ਘਰ ਦਾ ਖਾਣਾ ਹੀ ਵਧੀਆ ਮੰਨਿਆ ਜਾਂਦਾ ਸੀ ਪਰ ਹੁਣ ਪੀਜ਼ਾ, ਬਰਗਰ ਤੇ ਕੋਲਡ ਡਰਿੰਕ ਦੀ ਵਰਤੋ ਬਹੁਤ ਕੀਤੀ ਜਾਂਦੀ ਹੈ।ਇਸ ਨਾਲ ਸਾਡੀ ਸਿਹਤ ਵਿੱਚ ਵੀ ਨੁਕਸਾਨ ਹੋ ਰਿਹਾ ਹੈ।ਕਈ ਬਿਮਾਰੀਆਂ ਪੈਦਾ ਹੋ ਰਹੀਆਂ ਹਨ।

ਪੰਜਾਬ ਵਿੱਚ ਨਸ਼ਿਆਂ ਦਾ ਦਰਿਆ ਵਗ ਰਿਹਾ ਹੈ।ਇਸ ਨਾਲ ਪੰਜਾਬ ਦੀ ਜਵਾਨੀ ਨਸ਼ਿਆਂ ਨੇ ਖਾ ਲਈ ਹੈ।ਇਸ ਨੂੰ ਰੋਕਣਾ ਚਾਹੀਦਾ ਹੈ।ਤੇ ਇਸ ਲਈ ਸਖ਼ਤ ਕਾਨੂੰਨ ਵੀ ਬਣਾਏ ਜਾਣੇ ਚਾਹੀਦੇ ਹਨ।ਇਸ ਨਾਲ ਸੱਭਿਆਚਾਰ ਵਿੱਚ ਵੀ ਬਹੁਤ ਪਰਿਵਰਤਨ ਆਇਆ ਹੈ।

ਪੁਰਾਣੇ ਸੱਭਿਆਚਾਰ ਵਿੱਚ ਕੁੜੀਆਂ ਨੂੰ ਦਬਾਉਣ ਤੇ ਮੁੰਡਿਆਂ ਨੂੰ ਉਚਿਆੳਣ ਵਾਲਾ ਸੀ।ਅੋਰਤ ਨੂੰ ਪੈਰ ਦੀ ਜੁੱਤੀ ਸਮਝਿਆ ਜਾਂਦਾ ਸੀ। ਪਰ ਇਹ ਤਾਂ ਸਰੀਰ ਏ, ਜਿਸ ਵਿਚ ਰਹਿਣ ਵਾਲੀ ਜੀਵ ਆਤਮਾ ਨੀਲੇ ਅਸਮਾਨ ਹੇਠਾਂ ਰਹਿ ਕੇ ਵੀ ਖੁਸ਼ ਹੋ ਸਕਦੀ ਏ, ਪੱਥਰਾਂ ਤੇ ਸੌਂ ਕੇ ਵੀ ਯਾਰੜੇ ਦੇ ਸੱਥਰ ਨੂੰ ਚੰਗਾ ਕਹਿ ਸਕਦੀ ਏ। ਅਗਰ ਜਿਊਣ ਦਾ ਵੱਲ ਆ ਜਾਵੇ ਤਾਂ ਖੁਦ ਨੂੰ ਪਿਆਰ ਨਾਲ ਭਰਪੂਰ ਰਹਿ ਸਕਦਾ ਏ। ਛੋਟੀਆਂ-ਛੋਟੀਆਂ ਗੱਲਾਂ ਤੋਂ ਖੁਸ਼ੀ ਇੱਕਠੀ ਕਰ ਸਕਦਾ ਏ। ਹਰ ਹਾਲ ਖੁਸ਼ ਰਹਿ ਸਕਦਾ ਏ।

ਮਨਜੋਤ ਸਿੰਘ ਕੰਪਿਊਟਰ ਸਾਇੰਸ ਅਤੇ ਇੰਜੀਨੀਅਰਿੰਗ ਰੋਲ ਨੰਬਰ: 1901253

#### ਅਲਫਾਜ਼

ਕੀ ਕਰਨੇ ਮਹਿਲ ਮਨਾਰੇ ਜਦੋਂ ਰੱਬ ਨੂੰ ਧਿਆਉਣਾ ਨਹੀਂ ਜਿੱਤ ਕੇ ਕੀ ਕਰਨਾ ਏ ਜਿੰਦਗੀ ਚ ਜਦੋਂ ਰੱਬ ਨੂੰ ਹੀ ਚਾਹੁਣਾ ਨਹੀਂ ਪੈਸਾ ਪੈਸਾ ਕਰੀ ਜਾਣੇ ਬੰਦਿਆ ਭੁਲ ਗੁਰਦੁਆਰੇ ਦਾ ਤੈਨੂੰ ਰਾਹ ਗਿਆ ਯਾਦ ਤੈਨੂੰ ਰੱਬ ਉਦੋਂ ਆਉਣਾ ਜਦ ਦੁੱਖਾਂ ਨਾਲ ਤੇਰਾ ਵਾਹ ਪਿਆ ਕਲੱਬ ਨਾ ਬਣਾ ਮੋਟਰਾ ਨੂੰ ਖੇਤਾਂ ਨੂੰ ਵੱਟਾਂ ਨਾਲ ਸਜਾਈ ਵੇ ਲਾ ਕੇ ਗਾਣੇ ਨਹੀਂ ਆਉਣੀ ਬਰਕਤ ਲੈ ਰੱਬ ਦਾ ਨਾਮ ਕਰ ਫਸਲ ਦੀ ਉਪਜਾਈ ਵੇ ਪੜ ਕੇ ਬਾਣੀ ਗਰ ਨਾਨਕ ਦੀ ਆਪਣਾ ਜਿੱਤ ਪਰਜਾਲਾ ਵੇ ਛੱਡ ਕੇ ਦੁਨੀਆਂ ਦੇ ਰਿਵਾਜ ਸਾਰੇ ਸਿੱਖੀ ਸਰੂਪ ਅਪਣਾ ਲੈ ਵੇ ਨੱਬ ਦੀ ਹੋਂਦ ਜ ਰਹਿ ਬੰਦਿਆ ਕਦੇ ਨਾ ਤੂੰ ਹਾਰੇਗਾ ਇਕ ਵਾਰੀ ਰੱਬ ਨੂੰ ਧਿਆ ਕੇ ਦੇਖ ਹਰ ਪਲ ਖੁਸ਼ੀਆ ਨਾਲ ਗੁਜਾਰੇਗਾ।

> ਗੁਰਬਿੰਦਰ ਸਿੰਘ ਬਾਇਓ ਟੈਕਨੋਲੋਜੀ ਰੋਲ ਨੰਬਰ: 4007/18







#### ਨੂਰ ਨਾਨਕ

ਸਤਿਗੁਰ।ਮਾਨਵ ਏਕਤਾ, ਪ੍ਰੇਮ ਪਿਆਰ ਵਾਲੀ, ਜਿਊਂਦੀ ਜਾਗਦੀ ਸਨ ਤਸਵੀਰ ਸਤਿਗੁਰ।ਸਹਿਜ ਸੁਭਾਇ ਹੀ ਪਤੇ ਦੀ ਗੱਲ ਕਰਦੇ, ਸਦਾ ਰਹਿ ਕੇ ਗਹਿਰ ਗੰਭੀਰ ਸਤਿਗੁਰ।ਜਗਤ ਜੇਤੂ, ਸੁਧਾਰਕ, ਤੇ ਜਗਤ ਤਾਰਕ, ਜਗਤ ਗੁਰੁ ਤੇ ਜਾਹਰਾ ਸਨ ਪੀਰ ਸਤਿਗੁਰ।

#### ਮਨਜੋਤ ਸਿੰਘ ਕੰਪਿਊਟਰ ਸਾਇੰਸ ਅਤੇ ਇੰਜੀਨੀਅਰਿੰਗ ਰੋਲ ਨੰਬਰ: 1901253



ਮਨੁੱਖ ਨੂੰ ਆਪਣੇ ਚੰਗੇ ਭਵਿੱਖ ਲਈ ਵਿਕਾਸ ਅਤੇ ਵਿਨਾਸ਼ ਦੇ ਫਰਕ ਨੂੰ ਸਮਝਣ ਅਤੇ ਲਾਗੂ ਕਰਨ ਦੀ ਲੋੜ ਹੈ। ਇੰਜ ਮਹਿਸੂਸ ਹੁੰਦਾ ਹੈ ਕਿ ਸ਼ਾਇਦ ਮਨੁੱਖ ਨੂੰ ਇਹ ਸਮਝ ਆਉਣਾ ਸ਼ੁਰੂ ਹੋ ਗਿਆ ਹੈ ਕਿ ਵਿਕਾਸ ਤੇ ਨਾਂ ਤੇ ਵਿਨਾਸ਼ ਵੀ ਹੋ ਰਿਹਾ ਹੈ। ਪੂੰਜੀਵਾਦ ਵਾਲ਼ਾ ਮਾਡਲ ਇਸ ਦੁਨੀਆ ਨੂੰ ਵਿਨਾਸ਼ ਵੱਲ ਬਹੁਤ ਤੇਜੀ ਨਾਲ਼ ਲੈ ਕੇ ਜਾ ਰਿਹਾ। ਜੋ ਕਿ ਮਨੁੱਖੀ ਸੱਭਿਅਤਾ ਲਈ ਬਹੁਤ ਵੱਡਾ ਖਤਰਾ ਹੈ। ਮਨੁੱਖੀ ਸੱਭਿਅਤਾ ਤੇ ਮੰਡਰਾ ਰਹੇ ਇਸ ਖਤਰੇ ਨੂੰ ਟਾਲਣ ਲਈ, ਪੜੇ-ਲਿਖੇ ਅਤੇ ਸੂਝਵਾਨ ਲੋਕਾਂ ਨੂੰ ਨਿਰੰਤਰ ਯਤਨ ਕਰਨ ਦੀ ਲੋੜ ਹੈ।ਧੰਨਵਾਦ।

#### ਡਾ. ਰਣਜੀਤ ਸਿੰਘ ਪ੍ਰੋਫੈਸਰ, ਮਕੈਨੀਕਲ ਇੰਜੀਨੀਅਰਿੰਗ ਵਿਭਾਗ

ਸੜਦੀ ਹੋਈ ਲੋਕਾਈ ਨੂੰ ਤੱਕ ਕੇ,ਧੂਰੋਂ ਆਏ ਰੱਬ ਦੇ ਨੂਰ ਨਾਨਕ। ਮੈਲ ਮਨਾਂ ਦੇ ਸ਼ੀਸ਼ੇ ਤੋਂ ਲਾਹਣ ਖਾਤਰ ਹੋਏ ਆਪ ਹਜੁਰ ਨਾਨਕ।ਮਾਤਾ ਪਿਤਾ ਦੀ ਗੋਦ ਨੂੰ ਭਾਗ ਲੱਗੇ, ਨਾਨਕ ਨੂਰ ਦਾ ਓਦੋਂ ਪ੍ਰਕਾਸ਼ ਹੋਇਆ। ਹਿਰਦੇ ਤਪਦੇ ਇੱਕਦਮ ਸ਼ਾਂਤ ਹੋ ਗਏ, ਬਿਹਬਲ ਦਿਲਾਂ ਨੂੰ ਧਰਵਾਸ ਹੋਇਆ। ਭੈਣ ਨਾਨਕੀ, ਨਾਨਕ ਨੂੰ ਤੱਕ ਅੰਦਰੋਂ, ਕਹਿੰਦੀ ਕਲਯੁਗ ਚ ਵੀਰ ਅਵਤਾਰ ਆਇਆ। ਨੂਰੀ ਮੁੱਖ ਤੇ ਛਾਂ ਦੀ ਆੜ ਹੇਠਾਂ, ਫਨੀਅਰ ਸੱਪ ਵੀ ਕਰਨ ਦੀਦਾਰ ਆਇਆ।ਵੀਹ ਰਪਇਆਂ ਦਾ ਭੋਜਨ ਛਕਾਉਣ ਵਾਲਾ, ਭੁੱਖੇ ਭਾਈਆਂ ਦਾ ਮੱਦਦਗਾਰ ਆਇਆ। ਤੇਰਾਂ ਤੇਰਾਂ ਹੀ ਮੁੱਖੋਂ ਉਚਾਰ ਕੇ ਤੇ, ਉਹ ਤਾਂ ਤੇਰਾ ਸੀ ਕਰਨ ਪ੍ਰਚਾਰ ਆਇਆ।ਲਾ ਕੇ ਜਲ ਸਮਾਧੀ ਫਿਰ ਵਿਚ ਵੇਈਂ, ਨਾਨਕ ਪਹੁੰਚੇ ਸਨ ਸੱਚੇ ਦਰਬਾਰ ਅੰਦਰ। ਜਗਤ ਜਲੰਦੇ ਚ ਠੰਢ ਵਰਤਾਉਣ ਖਾਤਰ, ਧੂਰ ਦੀ ਬਾਣੀ ਲਿਆਏ ਸੰਸਾਰ ਅੰਦਰ। ਛੁਤ ਛਾਤ ਵਾਲੀ, ਉਚ ਨੀਚ ਵਾਲੀ, ਮੇਟ ਦਿੱਤੀ ਸੀ ਮੁੱਢੋ ਲਕੀਰ ਨਾਨਕ ਹਿੰਦੂ ਆਖਦੇ ਸਾਡਾ ਏ "ਗੁਰੂ" ਇਹ ਤਾਂ ਮੁਸਲਮਾਨਾਂ ਨੇ ਸਮਝਿਆ ਪੀਰ ਨਾਨਕ। ਮਲਕ ਭਾਗੋ ਦੀ ਝੁਕ ਗਈ ਨਜ਼ਰ ਹੈਸੀ, ਜਦ ਖ਼ੁਨ ਪੁੜਿਆਂ ਚੋਂ ਲਾਲੋ ਲਾਲ ਤੱਕਿਆ। ਸ਼ਰਧਾ ਨਾਲ ਬਾਬਰ ਸਿੱਜਦਾ ਆਣ ਕੀਤਾ, ਜੇਲ ਵਿਚ ਜਦੋਂ ਲੋਕਾਂ ਦੇ ਨਾਲ ਤੱਕਿਆ। ਵਲੀ ਕੰਧਾਰੀ ਦੇ ਉਦੋਂ ਸੀ ਵਲ ਨਿਕਲੇ, ਪੰਜੇ ਅੱਗੇ ਜਦ ਪੱਥਰ ਨਿਢਾਲ ਤੱਕਿਆ।ਰਾਖਸ਼ ਬੁੱਧੀ ਸੀ ਕੌਡੇ ਦੀ ਹਵਾ ਹੋਈ, ਜਦੋਂ ਸਾਹਮਣੇ ਸਾਹਿਬ ਕਮਾਲ ਤੱਕਿਆ।ਛੱਲਣੀ ਛੱਲਣੀ ਹੋਈ ਮਨੱਖਾ ਦੀ,ਬਦਲਣ ਆਏ ਸਨ ਆਪ ਤਕਦੀਰ







## ਗੁਲਵਾਨ ਘਾਟੀ ਦੇ ਮਹਾਨ ਹੀਰੋ

"ਸ਼ਹੀਦੋਂ ਕੀ ਚਿਤਾਉਂ ਪਰ ਲਗੇ ਹਰ ਵਰਸ ਮੇਲੇ ਵਤਨ ਪਰ ਮਿਟਨੇ ਵਾਲ ਕਾ ਬਾਕੀ ਯਹੀ ਨਿਸਾ ਹੋਗਾ" ਸਿੱਖ ਕੌਮ ਇਸ ਲਈ ਅਗਾਂਹਵਧੂ ਅਤੇ ਜਿਗਰੇ-ਦਿਲ ਸਮਝੀ ਜਾਂਦੀ ਹੈ ਕਿਉਂਕਿ ਇਨਾਂ ਨੂੰ ਜੰਗਾਂ-ਯੁੱਧਾ ਦਾ ਲੰਮਾਂ ਅਨੁਭਵ ਪ੍ਰਾਪਤ ਹੈ।

ਸਿਰਫ 23 ਸਾਲ ਦਾ ਸੀ ੳਹ ਸਿੱਖ ਨੌਜਵਾਨ ਸ: ਗੁਰਤੇਜ ਸਿੰਘ ਜਿਸ ਦੇ ਅਜੇ ਮੁੱਛਾਂ ਵੀ ਹਲਕੀਆਂ ਹਲਕੀਆਂ ਆਈਆਂ ਸਨ ੳਹ ਗਲਵਾਨ ਦੀ ਲੜਾਈ ਵਿਚ ਸ਼ਹੀਦ ਹੋ ਕਿ ਬੀਰ ਗਤੀ ਪਾ ਗਿਆ, ਲੇਕਿਨ ਸ਼ਹੀਦ ਹੋਣ ਤੋਂ ਪਹਿਲਾਂ ੳਸਨੇ ੳਹ ਬੀਰਤਾ ਦਿਖਾਈ ਜਿਸ ਨਾਲ ਨਾ ਸਿਰਫ ਉਸਦੀ ਰੈਜਮੈਂਟ ਦਾ ਨਾਂ ਸਿਰਫ ਭਾਰਤੀ ਫੌਜ਼ ਦਾ, ਸਗੋਂ ਸਿੱਖ ਕੌਮ ਦਾ ਵੀ ਨਾਮ ਬਹਤ ਉੱਚਾ ਕਰ ਦਿੱਤਾ। ਉਹ ਸੀ ਸ਼ਹੀਦ ਗੁਰਤੇਜ਼ ਸਿੰਘ ਜਿਸ ਨੇ ਗਲਵਾਨ ਦੀ ਲੜਾਈ ਵਿਚ ਇੱਕ ਨਹੀਂ ਦੋ ਨਹੀਂ ਪੂਰੇ ਇਕ ਦਰਜਨ ਚੀਨੀ ਫੌਜੀਆਂ ਨੂੰ ਮੌਤ ਦੇ ਘਾਟ ਉਤਾਰ ਦਿੱਤਾ ਉਹ ਵੀ ਉਦੋਂ ਜਦੋਂ ਚਾਰ ਚਾਰ ਚੀਨੀ ਸੈਨਿਕਾ ਨੇ ੳਸ ਨੂੰ ਪਕੜਿਆ ਹੋਇਆ ਸੀ ਬਾਹ ਵਈ ਗਰਤੇਜ਼ ਤਸੀ ਸਾਬਿਤ ਕਰ ਦਿੱਤਾ ਇਸ ਤਰਾਂ ਕਿਉਂ ਕਿਹਾ ਜਾਂਦਾ ਹੈ ਕਿ ਇਕੱਲਾ ਇੱਕ ਸਿੱਖ ਸਵਾ ਲੱਖ ਦੇ ਬਰਾਬਰ ਹੈ। ਅੱਜ ਜਦ ਮੈ ਗੁਰਤੇਜ਼ ਸਿੰਘ ਦੀ ਬਹਾਦਰੀ ਬਾਰੇ ਲਿਖ ਰਿਹਾ ਹਾਂ ਮੇਰੀ ਅੱਖਾਂ ਸਾਹਮਣੇ ਚਮਕੌਰ ਦੀ ਕੱਚੀ ਗੜੀ ਦੀ ਯਾਦ

ਆ ਜਾਂਦੀ ਹੈ ਜਿਥੇ 40 ਸਿੰਘਾਂ ਨੇ ਦੱਸ ਲੱਖ ਮੁਗਲ ਫੌਜਾਂ ਦਾ ਮੁਕਾਬਲਾ ਕੀਤਾ।

ਗਲਵਾਨ ਵਿਚ 15 ਜੂਨ ਦੀ ਸ਼ਾਮ ਨੂੰ ਚੀਨੀ ਸੈਨਿਕਾਂ ਨੇ ਧੋਖੇ ਨਾਲ ਸਾਡੇ 20 ਸੈਨਿਕਾਂ ਨੂੰ ਸ਼ਹੀਦ ਕਰ ਦਿੱਤਾ ਇਸ ਤੋਂ ਬਾਅਦ ਪੰਜਾਬ ਦੀ ਘਾਤਕ ਪਲਟੂਨ ਬਿਹਾਰ ਰੈਜਮੈਂਟ ਦੀ ਮਦਦ ਲਈ ਪਹੁੰਚੀ ਇਸ ਪਲਟੂਨ ਨੇ ਉਹ ਵਿਖਾ ਦਿੱਤਾ ਕਿ ਚੀਨੀ ਫੌਜ ਗਲਵਾਨ ਦੀ ਲੜਾਈ ਨੂੰ ਸੁਪਨੇ ਵਿਚ ਵੀ ਨਹੀ ਭੁੱਲ ਪਾਊਗੀ। ਇਹਨਾਂ ਜਵਾਨਾਂ ਕੋਲ ਆਪਣੀਆਂ ਕ੍ਰਿਪਾਨਾਂ, ਲਾਠੀਆਂ ਆਦਿ ਹੀ ਸਨ ਕੋਈ ਬੜਾ ਹਥਿਆਰ ਨਹੀਂ ਸੀ ਲੇਕਿਨ ਇਹ ਬੀਰਤਾ ਦੇ ਜੋਸ ਵਿਚ ਮਦਹੋਸ਼ ਸਨ ਇਨਾਂ ਨੂੰ ਛੋਟੇ ਜਾਂ ਬੜੇ ਹਥਿਆਰ ਦੀ ਕੋਈ ਪਰਵਾਹ ਨਹੀਂ ਸੀ ਇਹ 'ਬੋਲੇ ਸੋ ਨਿਹਾਲ ਸਤਿ ਸ੍ਰੀ ਅਕਾਲ ਦੇ ਜੈਕਾਰੇ ਲਾੳਦੇ ਹੋਏ ਚੀਨੀਆਂ ਤੇ ਟੱਟ ਪਏ ਇਕ ਪਾਸੇ ਉਨਾਂ ਦੀ ਦਹਾੜ ਅਤੇ ਦੂਜੇ ਪਾਸੇ ਉਨਾਂ ਦੀ ਬੀਰਤਾ ਵੇਖਣ ਯੋਗ ਸੀ। ਗੁਰਤੇਜ਼ ਸਿੰਘ ਨੂੰ ਚਾਰ ਚੀਨੀ ਸੈਨਿਕਾਂ ਨੇ ਘੇਰ ਲਿਆ ਉਸ ਨੇ ਬੋਲੇ ਸੋ ਨਿਹਾਲ ਸਤਿ ਸ੍ਰੀ ਅਕਾਲ ਦਾ ਜੈਕਾਰਾ ਬੁਲਾਉਂਦੇ ਹੋਏ ਉਨਾਂ ਦੀ ਪਕੜ ਤੋਂ ਬਾਹਰ ਹੋ ਗਿਆ ਅਤੇ ਦੋ ਚੀਨੀਆਂ ਨੂੰ ਪਹਾੜੀ ਤੋਂ ਥੱਲੇ ਸੁੱਟ ਕੇ ਮਾਰ ਗਿਰਾਇਆ ਅਤੇ ਇਸ ਤੋਂ ਬਾਅਦ ਦੂਜੇ ਦੋ ਚੀਨੀ ਸੈਨਿਕਾਂ ਨਾਲ ਵੀ ਇਸ ਤਰਾਂ ਕੀਤਾ ਇਸ ਦੌਰਾਨ ਗੁਰਤੇਜ਼ ਸਿੰਘ ਆਪ ਵੀ ਪਹਾੜੀ ਤੋਂ ਥੱਲੇ ਖਿਸਕ





## ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਜੀ

15 ਅਪ੍ਰੈਲ 1469 ਨੂੰ ਧਾਰਿਆ ਅਵਤਾਰ, ਸਾਰਾ ਜਗ ਇਹਨਾਂ ਨੂੰ ਕਹਿੰਦਾ ਕਰਤਾਰ। ਰੱਬੀ ਰੂਪ ਨੂੰ ਪਛਾਣਿਆ ਦਾਈ ਦੌਲਤਾ, ਇਹ ਬਾਲਕ ਨਈ ਆਮ ਭੇਤ ਥੋੜਾ ਖੋਲਤਾ। ਭੈਣਾਂ ਆਪਣੇ ਵੀਰਾਂ ਨੂੰ ਕਹਿਣ ਮਹਾਨ, ਬੇਬੇ ਨਾਨਕੀ ਪਛਾਣਗੀ ਨਾਨਕ ਤਾਰਨਾ ਜਹਾਨ। ਦਿੱਤਾ ਉਪਦੇਸ਼, ਬੰਦਿਆ ਮੁੱਖੋ ਵਾਹਿਗੁਰੂ ਬੋਲ, ਮੋਦੀ ਖਾਨੇ ਵਿੱਚ ਦਿੱਤਾ ਨਾਨਕ ''ਤੇਰਾਂ-ਤੇਰਾਂ ਤੋਲ। ਕੀਤੀਆਂ ਉਦਾਸੀਆਂ ਬਾਬੇ ਨਾਨਕ ਨੇ ਚਾਰ, ਵਲੀ ਕੰਧਾਰੀ ਵਰਗਿਆਂ ਨੂੰ ਦਿੱਤਾ ਜਿਉਂਦੇ ਜੀਅ ਮਾਰ। ਜਿਨਾਂ ਲਿੱਖੇ "ਗੁਣਤਾਸ਼", ਉਹ ਕਣ ਤੋਂ ਵੀ ਘੱਟ ਲੱਗੇ, ਸਾਰੇ ਲਫਜ ਛੋਟੇ ਗੁਰੂ ਨਾਨਕ ਦੀ ਤਾਰੀਫ ਅੱਗੇ।

> ਗੁਣਤਾਸ਼ ਕੋਰ ਕੰਪਿਊਟਰ ਸਾਇੰਸ ਅਤੇ ਇੰਜੀਨੀਅਰਿੰਗ ਰੋਲ ਨੰਬਰ:1901234

ਗਿਆ ਪਰ ਵੱਡੇ ਪੱਥਰ ਨਾਲ ਰੁੱਕ ਗਿਆ। ਚਾਰ ਚੀਨੀਆਂ ਨੂੰ ਮਾਰਨ ਉਪਰੰਤ ਉਸਨੇ ਆਪਣੀ ਪੱਗ ਠੀਕ ਕੀਤੀ ਅਤੇ ਸ਼ੇਰ ਦੀ ਤਰਾਂ ਚੀਨੀ ਸੈਨਿਕਾਂ ਤੇ ਟੁੱਟ ਪਿਆ ਅਤੇ ਉਸ ਨੇ ਸੱਤ ਚੀਨੀ ਸੈਨਿਕ ਆਪਣੀ ਕ੍ਰਿਪਾਨ ਨਾਲ ਮਾਰ ਦਿੱਤੇ। ਇਸ ਸਮੇਂ ਇਕ ਚੀਨੀ ਸੈਨਿਕ ਨੇ ਛੁਰਾ ਉਸ ਦੀ ਪਿੱਠ ਵਿਚ ਮਾਰਿਆ ਜੋ ਉਸਦੇ ਸਰੀਰ ਵਿਚ ਆਰ ਪਾਰ ਹੋ ਗਿਆ ਪਰ ਗੁਰਤੇਜ਼ ਸਿੰਘ ਦੀ ਦਲੇਰੀ ਵੇਖੋ ਉਸ ਨੇ ਉਸ ਹਮਲਾਵਾਰ ਸੈਨਿਕ ਨੂੰ ਵੀ ਮਾਰ ਦਿਤਾ ਉਸ ਤੋਂ ਬਾਅਦ ਗੁਰਤੇਜ਼ ਸਿੰਘ ਜਮੀਨ ਤੇ ਡਿੱਗ ਪਿਆ ਅਤੇ ਬੀਰ ਗਤੀ ਨੂੰ ਪ੍ਰਾਪਤ ਹੋ ਗਿਆ। ਉਸ ਦੇ ਨਜਦੀਕ ਪਈਆਂ ਚੀਨੀ ਫੌਜੀਆਂ ਦੀ ਲਾਸਾਂ ਗੁਰੂ ਗੋਬਿੰਦ ਸਿੰਘ ਜੀ ਦੀਆਂ ਇਹ ਪੰਗਤੀਆਂ ਦੀ ਯਾਦ ਦਆ ਰਹੀਆਂ ਸਨ।

"ਸਵਾਲਾਖ ਸੇ ਏਕ ਲੜਾਉ ਤਬੇ ਗੋਬਿੰਦ ਸਿੰਘ ਨਾਮ ਕਹਾਉ" ਬਾਹ ਗੁਰਤੇਜ਼ ਸਿੰਘ ਤੁਸੀ ਆਪਣੀਆਂ ਅਗਲੀਆਂ ਪਿਛਲੀਆਂ ਪੀੜੀਆਂ ਦਾ ਨਾਮ ਸੁਨਿਹਰੀ ਅੱਖਰਾਂ ਵਿਚ ਲਿੱਖ ਦਿੱਤਾ ਅਤੇ ਤੁਸੀ ਬੀਰਤਾ ਦੇ ਕਿੱਸੇ, ਕਹਾਣੀਆਂ ਅਰ ਦੁਸ਼ਮਣ ਦੀ ਯਾਦ ਅਤੇ ਸਾਡੇ ਇਤਿਹਾਸ ਵਿਚ ਹਮੇਸ਼ਾ ਰਹੋਗੇ।

ਮੈਂ ਇਥੇ ਇਹ ਲਿਖਣ ਤੋਂ ਗੁਰੇਜ਼ ਨਹੀਂ ਕਰਾਂਗਾ ਕਿ ਹੁਣ ਤੱਕ ਸਾਡੀ ਸਰਕਾਰ ਨੂੰ ਸ਼ਹੀਦ ਗੁਰਤੇਜ ਸਿੰਘ ਲਈ "ਪਰਮਵੀਰ ਚੱਕਰ" ਐਲਾਨ ਕਰ ਦੇਣਾ ਚਾਹੀਦਾ ਹੈ।

#### ਸੁਰਿੰਦਰ ਸਿੰਘ ਲੈਕਚਰਾਰ, ਕੇਂਦਰੀ ਵਰਕਸ਼ਾਪ







#### ਬਾਬਾ ਨਾਨਕ

ਜਦ ਹੰਦਾ ਸੀ ਜਲਮ ਇਸ ਖਲਕਤ ਤੇ ਜਦ ਛਾਇਆ ਸੀ ਦਨੀਆਂ ਤੇ ਘਪ ਹਨੇਰਾ। ਜਦ ਹੰਦੀ ਸੀ ਲੱਟ ਗਰੀਬ ਦੀ ਜਦ ਸਾਧ ਤੇ ਪਖੰਡੀਆਂ ਨੇ ਲਾਇਆ ਸੀ ਡੇਰਾ। ਬਾਹ ਨਾ ਫੜਦਾ ਸੀ ਕੋਈ ਕਿਸੇ ਦੀ ਸਭ ਮਤਲਬ ਆਪਣੇ ਕਢਦੇ ਸੀ। ਜਾਤ-ਪਾਤ ਕਰਮਾਂ-ਕਾਂਡਾ ਵਿੱਚ ਰੱਝੇ ਸੀ ਸਾਰੇ ਬਾਹਮਣ ਨੂੰ ਉੱਚਾ, ਤੇ ਸੂਦਰ ਨੂੰ ਦੱਬਦੇ ਸੀ। ਉਦੋ ਜੁਲ਼ਮ ਮਿਟਾਉਣ ਦੇ ਲਈ ਪਿਤਾ ਮਹਿਤਾ ਕਾਲੁਦੇ ਘਰ ਇੱਕ ਰੱਬੀ ਇਲਾਹੀ ਨੂਰ ਆਇਆ ਸੀ। ਧੰਨ ਮਾਤਾ ਤਿ੍ਪਤਾ ਦੀ ਕੁੱਖ ਨੂੰ ਜਿਸ ਨੇ ਭਾਗ ਲਗਾਇਆ ਸੀ। ੳਦੋ ਜਲਮ ਮਿਟਾਵਣ ਦੇ ਲਈ ਮੇਰਾ ਬਾਬਾ ਨਾਨਕ ਆਇਆ ਸੀ। ਇੱਕ ਓਂਕਾਰ ਦਾ ਸੀ ਜਾਪ ਲਗਾਇਆ, ਪਾਂਧੇ ਨੂੰ ਵੀ ਆਪ ਪੜਾਇਆ, ਕਾਲੂ ਦੇ ਦਿੱਤੇ ਵੀਹ ਦਾ ਭੁਖਿਆਂ ਨੂੰ ਸੀ ਲੰਗਰ ਛਕਾਇਆ। ਵੇਈਂ ਦੇ ਵਿੱਚ ਚੱਭੀ ਲਾ ਕੇ ਧਰਮ ਦਾ ਸੀ ਵਹਿਮ ਮੁਕਾਇਆ। ੳਦੋ ਜਲਮ ਮਿਟਾਵਣ ਦੇ ਲਈ ਧਰਤੀ ਤੇ ਸੀ ਬਾਬਾ ਨਾਨਕ ਆਇਆ।

ਮੋਦੀਖਾਨੇ ਵਿਚ ਕੀਤੀ ਨੌਕਰੀ ਤੇਗ-ਤੇਗ ਤੋਲਦਾ ਸੀ। ਕਿਉਂ ਲੜਦੇ ਓ ਧਰਮਾਂ ਦੇ ਸਿਰ ਤੇ ਇਕੋ ਈ ਆ ਰੱਬ ਬੋਲਦਾ ਸੀ। ਸੱਚਾ ਧਰਮ ਦਿਖਾਵਣ ਦੇ ਲਈ ਉਸਨੇ ਜਗ ਤੇ ਫੇਰਾ ਪਾਇਆ ਸੀ। ਉਦੋ ਜੁਲਮ ਮਿਟਾਵਣ ਦੇ ਲਈ ਮੇਰਾ ਬਾਬਾ ਨਾਨਕ ਆਇਆ ਸੀ। ਕਿਰਤ ਕਰੋ. ਨਾਮ ਜਪੋ. ਵੰਡ ਛਕੋ ਇਹ ਤਿੰਨ ਦਾ ਪਾਨ ਪੜਾਇਆ ਸੀ। ਤਾਹੀ ਤਾ ਲਾਲੋ ਦੇ ਘਰ ਜਾ ਕੇ ੳਸ ਨੇ ਡੇਰਾ ਲਾਇਆ ਸੀ। ਤੇ ਮਲਿਕ ਭਾਗੋ ਦਾ ਸੱਦਾ ਠੁਕਰਾ ਕੇ ਉਸ ਨੂੰ ਪਾਠ ਪੜਾਇਆ ਸੀ। ਉਦੋ ਜੁਲਮ ਮਿਟਾਵਣ ਦੇ ਲਈ ਮੇਰਾ ਬਾਬਾ ਨਾਨਕ ਆਇਆ ਸੀ।

> ਲਵਪ੍ਰੀਤ ਸਿੰਘ ਬੀ.ਐੱਸ.ਸੀ. (ਖੇਤੀਬਾੜੀ) ਰੋਲ ਨੰਬਰ: 1819706






## संपादक: डा. राकेश चन्द्र गंगवार

# **BCETIANS** 2019-2020







# BCETIANS



EDITORIAL

मुझे यह जानकर अपार हर्ष हो रहा है कि विगत वर्षो की भांति इस वर्ष भी BCETIANS-2020 पत्रिका प्रकाशित हो रही है यह पत्रिका विद्यार्थियों में निहित असीम प्रतिभा एवं चौतरफा विकास को प्रदर्शित करती है। मै आशा करता हूँ कि हमारे उर्जावान विद्यार्थी न केवल अपने समाज का विकास करेगें, अपितु अपनी प्रतिभाओं को भावी जीवन में उचित स्तर पर प्रदर्शित भी करेंगें। इन्ही शब्दों के साथ मै सभी विद्यार्थियों को हार्दिक बधाई देता हूँ तथा शुभेच्छा से उनके उज्जवल भविष्य की कामना करता हूँ।

> डा₀ राकेश चन्द्र गंगवार प्रोफेसर संगणक विभाग

## **Hindi Section**



## रौनक पुरानी

खो गई है इस जहां की आज वह रौनक पुरानी मिट रहा है, मिट रहा है प्रेम उसकी मिट रही है एक निशानी। है करोना महामारी और प्यार का अकाल है , हर नजर में खौफ है हर एक का दिन बेहाल है. अब हवाओं में है दहशत धरती भी सुर्ख हो रही। मानो मानवता को ये दुनिया ,अपने सिर पर ढो रही. मानवता अगर खत्म हुई तो परिणाम भुगतना भरी है घर में रहिए, सुरक्षित रहिए, स्वस्थ रहिए; मानिए फरमान जो भीआया सरकारी है। मिल कर रहिए , सेवा करिए, प्राथमिक सुविधा जारी है। जीतेंगे हम जंग फैली जो महामारी है. नफरत ना फैलाएं इसमें खुद को नुकसान भारी है।।

> नन्देश्वर कृष्णा URN: 1601665 अंतिम वर्ष इलेक्ट्रॉनिक्स और संचार इंजीनियरिंग

## फिर छिड़ी रात बात फूलों की

(मख़दूम मोहिउद्दीन)

फिर छिड़ी रात बात फूलों की रात है या बारात फूलों की

फूल के हार, फूल के गजरे शाम फूलों की रात फूलों की

आपका साथ, साथ फूलों का आपकी बात, बात फूलों की

नज़रें मिलती हैं जाम मिलते हैं मिल रही है हयात फूलों की

कौन देता है जान फूलों पर कौन करता है बात फूलों की

वो शराफ़त तो दिल के साथ गई लुट गई कायनात फूलों की

अब किसे है दमाग़े तोहमते इश्क़ कौन सुनता है बात फूलों की

मेरे दिल में सरूर-ए-सुबह बहार तेरी आँखों में रात फूलों की

फूल खिलते रहेंगे दुनिया में रोज़ निकलेगी बात फूलों की

ये महकती हुई ग़ज़ल 'मख़दूम' जैसे सहरा में रात फूलों की

> सौरभ याढव १७ बैच CSE







कुछ रह तो नहीं गया?

जिंदगी के सफर में हर मुकाम पर यही सवाल परेशान करता रहा। ....

3 माह के बच्चे को दाईं के पास रख कर नौकरी पर जाने वाली मां से दाईं ने पूछा , कुछ रह तो नहीं गया | पर्स , चाबी सब ले लिया ना?

अब वो कैसे हां कहैं ?

पैसे के पीछे भागते भागते सब पाने की चाह में वो जिसके लिए सब कुछ कर रही है ,वह ही रह गया |

बड़ी तमन्नाओं के साथ बेटे को पढ़ाई के लिए विदेश भेजा था । वह वही पढ़ कर सेटल हो गया, पोते के जन्म पर बड़ी मुश्किल से 3 माह का वीजा मिला था।

चलते समय बेटे ने प्रश्न किया सब कुछ देख लिया न ,कुछ रह तो नहीं गया ,क्या कहते वो छूटने को बचा ही क्या है|

रिटायरमेंट की शाम पीए ने कहा देख लीजिए सर, कुछ रह तो नहीं गया, थोड़ा रुका और सोचा पूरी जिंदगी तो यही आने जाने में बीत गई ,अब क्या रह गया होगा ।

शमशान से लौटते हुए किसी ने मुझसे पूछा, कुछ रह तो नहीं गया?

नहीं कहते हुए मैं आगे बढ़ा ,

एक बार पीछे मुड़कर देखा ,चिता की सुलगती हुई आग देखकर मन भर आया ।

जलते हुए चेहरे की झलक तलाशने की असफल कोशिश की और वापस लौट आया|

दोस्त ने पूछा ,कुछ रह गया था क्या? भरी आंखों से बोला नहीं कुछ भी नहीं रहा अब...

और जो कुछ भी रह गया हैं वह सदा मेरे साथ रहेगा।।

विमलेश सात्त्विक,

१९ बैच.









मुक्तक

उस रोज कुछ इस तरह कयामत हुयी, एक मुस्कान मेरी जिंदगी चुरा ले गयी ।। पर कभी जरूरत पडे तो याद करना, मैने अपना रास्ता बदला हैं जिंदगी नहीं| याद में तेरी दर्द है वो सन्नाटे भी रो पड़ते है जब उपवन के पर्णपुत्र सो जाते है , जब हवा मै होले होले कोई जुगनू उड़ जाता है, जब निशा की गरिमा में कायम चंद्र लुप्त हो जाता है . जब बंद पंकनी भवरे को थोड़ा सा सहलाती है । लिखे हुए खत उसको कोरा कागज बन जाते है , प्यार भरी बातों से एक घाव हो जाता है , दिल खाली खाली हो जाता है पर चेहरा याद नहीं आता ।।2 कोई पहचान बन जाए मेरे कृत्रिम बनवाट की, कोई फूल बन जाये मेरे दिल के सजावट की, कोई खोल दे बंधन मेरे सारे रुकावट की। मगर ऐसा कहा होता जो कल सपनो मे सोचा था. की तू सपना ही बन जाये जो मेरे नींद में आए ।।

हिमांशुहरिनंदन शुक्ल कंप्यूटर विज्ञान और इंजीनियरिंग। १७ बैच

दिल की हलचल मुझे रोकने क्यों लगी ताल में पायले क्यों हैं बजने लगीं तुम यहां हो यहां हो सनम, दिल की धड़कन है मुझसे कहने लगी। रात में जब कोई ध्वनि सुनाई पड़ी आँख नम हो गयी दिल ने अंगड़ाई ली, थी यी बातें पिछले बरष की सनम इस बरष तो तुम दिखी भी नहीं ।।

तुमको देखने की जिद्दत में बदनाम गए, हम तो आशिक थे पर बेवजह गुमनाम हो गए||

मेरे मौला मेरे आका मुझे इतनी तसस्ली दें मैं उसको याद तो रखू मगर वो याद न आये , वो मेरे ख्वाब मे आकर मुझे अब भी बुलाती है मै उसको भूल जाता हूँ मगर वो याद आती है ||

मेरे महबूब की आंखे समंदर पार लड़ती है, की जब मैं पास होता हूँ तब वो दूर होती है । मेरे अश्को की एक कीमत तू चूका देना .

कोई बेहतर मिले मुझसे तो मुझको भी बता देना ।।









ए इंसान वक़्त की कदर कर यह तो चलता हरदम, तू इसके संग चल या थम ए इंसान वक़्त की कदर कर | जब वक़्त चला जाता है तब तू पछताता है , लाख रोने पर भी गया वक़्त लौट कभी न आता है । ए इंसान वक़्त की कदर कर।| वक़्त की अमूल्यता को पहचान इसके संग चलता जा, और खुद का काशिद बन जा इसकी अमूल्यता का तू पालन कर । ए इंसान वक़्त की कदर कर|| करे अगर इंसान कदर तो वक़्त भी उसकी कदर करता है, चलता जा वक़्त की डोर पकड़ कर । ए इंसान वक़्त की कदर कर|| सिकंदर भी इसने देखा , और राणा को भी , विजय का रास्ता जहाँ खत्म होता हैं। वो वक़्त का पहला दरवाजा होता है||

> दिव्य श्रीवास्तव कम्प्यूटर विभाग ,१९ बैच











# BCETIANS 2019-2020

## Editor: Capt. (Dr.) Nirmal S. Kalsi

## **Technical Section**

## BCETIANS-2020





It is indeed a matter of pleasure to express my thoughts as an editor of technical section of our annual college magazine, BCETIANS 2018.

I am happy to understand and appreciate the students of this college who have come out successfully, to contribute in the needed of hour to understand this fast changing world through their articles in this magazine. This magazine should be viewed as a launch pad for those who have the potential to thrive ahead.

I, in BCETIANS, believe that sky is not the limit for us, it is just the beginning. I really enjoyed and learned compiling technical section of this magazine immensely. Once you go through this section of the magazine, you are going to zeal for more......Promised. Happy Reading!

Capt. (Dr.) Nirmal Singh Kalsi Editor, Technical Section

## **Technical** Section



### **ARTIFICIAL INTELLIGENCE**

### WHAT IS ARTIFICIAL INTELLIGENCE?

Artificial intelligence (AI) is wide-ranging branch of computer science concerned with building smart machines capable of performing tasks that typically require human intelligence. AI is an interdisciplinary science with multiple approaches, but advancements in machine learning and deep learning are creating a paradigm shift in virtually every sector of the tech industry.

While addressing the peoples at the Japan Al Experience in 2017, Data Robot CEO Jeremy Achin began his speech by offering the following definition of how Al is used today: "Al is a computer system able to perform tasks that ordinarily require human intelligence... Many of these artificial intelligence systems are powered by machine learning, some of them are powered by deep learning and some of them are powered by very boring things like rules."

### **ARTIFICIAL INTELLIGENCE EXAMPLES:-**

- Smart assistants (like Siri and Alexa).
- Self-Driving cars.
- Disease mapping and prediction tools.
- Manufacturing and drone robots.
- Optimized, personalized healthcare treatment recommendations.
- Conversational bots for marketing and customer service.
- Robo-advisors for stock trading.
- Spam filters on email.

• Social media monitoring tools for dangerous content or false news.

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• Song or TV show recommendations from Spotify and Netflix.

#### WHICH COUNTRIES ARE LEADING THE WAY IN AI?

It'd be a big mistake to think the US tech giants have the field of AI sewn up. Chinese firms Alibaba, Baidu, and Lenovo are investing heavily in AI in fields ranging from ecommerce to autonomous driving. As a country China is pursuing a three-step plan to turn AI into a core industry for the country, one that will be worth 150 billion Yuan (\$22bn) by 2020.

Baidu has invested in developing self-driving cars, powered by its deep learning algorithm, Baidu AutoBrain, and, following several years of tests, plans to roll out fully autonomous vehicles in 2018 and mass-produce them by 2021.

Baidu has also partnered with Nvidia to use AI to create a cloud-to-car autonomous car platform for auto manufacturers around the world.

The combination of weak privacy laws, huge investment, concerted data-gathering, and big data analytics by major firms like Baidu, Alibaba, and Tencent, means that some analysts believe China will have an advantage over the US when it comes to future AI research.

### WILL AN AI STEAL YOUR JOB?

The possibility of artificially intelligent systems replacing much of modern manual labour is perhaps a more credible near-future possibility.





While AI won't replace all jobs, what seems to be certain is that AI will change the nature of work, with the only question being how rapidly and how profoundly automation will alter the workplace.

There is barely a field of human endeavour that AI doesn't have the potential to impact. As AI expert Andrew Ng puts it: "Many people are doing routine, repetitive jobs. Unfortunately, technology is especially good at automating routine, repetitive work", saying he sees a "significant risk of technological unemployment over the next few decades".

The evidence of which jobs will be supplanted is starting to emerge. Amazon has just launched Amazon Go, a cashier-free supermarket in Seattle where customers just take items from the shelves and walk out. What this means for the more than three million people in the US who works as cashiers remains to be seen. Amazon again is leading the way in using robots to improve efficiency inside its warehouses. Amazon has more than 100,000 bots in its fulfilment centres, with plans to add many more. But Amazon also stresses that as the numbers of bots have grown, so has the number of human workers in these warehouses. However, Amazon and small robotics firms are working to automate the remaining manual jobs in the warehouse, so it's not a given that manual and robotic labour will continue to grow hand-in-hand.

**THE CIVIL ENGINEERS** 

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We lay down their rolling roads

and nut down all their trees

and if the order ever come

we'd fouge the raging seas .

And when they need to sleep a while, we put them up a town,

and build all their bridges , So the infanity won't drown,

we get them over rivers and across mountain streams.

Do everything but tuk them in and wish them pleasent dreams

And when the going gets really rough and bombs burst in the ears,

a whole division is opt to pray god to send the civil engineers.

Vanshika Malpotra URN: 1702340 Civil Engineering, 3<sup>rd</sup> Year

ABIJOT GUPTA URN: 1701959 CSE-A, 3<sup>rd</sup> Year





### **AUTOMATION: MACHINE VS MAN**

#### Abstract:

Today everybody wants all the work done fast, because of the life of everyone is being day-to-day busy. Life has become easier for humans when automation came. Automation is present everywhere healthcare, kitchen, industries, education, home, etc. Home automation is one of the major growing industries that can change the way people live. The developed system can be integrated as a single portable unit and allows one to wirelessly control lights, fans, air conditioners, television sets, security cameras, electronic doors, computer systems, audio & visual equipment, etc. **Description:** 

The word "Automation" means the technique, method or system of operating or controlling a process by highly automatic means, as by electronic devices, reducing human intervention to a minimum. In industrial context, automation can be defined as a technology that is concerned with the use of mechanical, electrical/electronic, and computer-based systems to control production process.

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Automation is the technology by which a process or procedure is performed with minimal human assistance. Automation or automatic control is the use of various control systems for operating equipment such as machinery, processes in factories, boilers and heat treating ovens, switching on telephone networks, steering and stabilization of ships, aircraft and other applications and vehicles with minimal or reduced human intervention. Over the past forty years, information technology has completely changed the office



Tesla Gigafactory automated manufacturing



environment. Such functions as communication, documenting, correspondence, and filing have become fully automated. Offices today even feel and look completely different from what used to exist in the 1950.

Fixed automation, also known as "hard automation," refers to an automated production facility in which the sequence of processing operations is fixed by the equipment configuration. In effect, the programmed commands are contained in the machines in the form of cams, gears, wiring, and other hardware that is not easily changed over from one product style to another. This form of automation is characterized by high initial investment and high production rates. It is therefore suitable for products that are made in large volumes. Examples of fixed automation include machining transfer lines found in the automotive industry, automatic assembly machines, and certain chemical processes.

Programmable automation is a form of automation for producing products in batches. The products are made in batch quantities ranging from several dozen to several thousand units at a time. For each new batch, the production equipment must be reprogrammed and changed over to accommodate the new product style.

#### **Robots in manufacturing:**

Robotic process automation (RPA) is the application of technology that allows employees in a company to configure computer software or a "robot" to capture and interpret existing applications for processing a transaction, manipulating data, triggering responses and communicating with other digital systems. Any company that uses labor on a large scale for general knowledge process work, where people are performing high-volume, highly transactional process functions, will boost their capabilities and save money and time with robotic process automation software.

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In nearly all industrial robotic applications, the robot provides a substitute for human labour. There are certain characteristics of industrial jobs performed by humans that identify the work as a potential application for robots:

The operation is repetitive, involving the same basic work motions every cycle;

The operation is hazardous or uncomfortable for the human worker (*e.g.,* spray painting, spot welding, arc welding, and certain machine loading and unloading tasks);

The task requires a work part or tool that is heavy and awkward to handle; and

The operation allows the robot to be used on two or three shifts.

### **Conclusion:**

The technology of Automation is very helpful for humans and for this modern era because of this piece of tech we can perform the manufacturing and so many activities in so much fast way and with more accuracy because machines don't make





mistakes like humans that's boots our economy. You can see the difference in manufacturing in the starting of the 20th century and this time with the help of this figure which is shown below:



Not only in manufacturing, but Automation also helps in living our daily life and because of this our living standard improves. Hence we can say that Automation is a modern piece of technology which is worthing this era.

### **References:**

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- Applications of Automation And Robotics (www.britannica.com)

Sakchham Kumar Sharma URN: 1801296 CRN: 1087/18 CSE, 2<sup>nd</sup> Year

## THE BLACK DAY: 14th FEB.2019 PULWAMA ATTACK

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A convoy of vehicles carrying serve of personnel of vehicles on the Jammu Srinagar national highway was attacked by a vehicle borne suicide bomber at Lethpora in the Pulwama district, Jammu and Kashmir, India. The attack resulted in the death of 40 central reserve police force (CRPF) personnel and the attacker. The responsibility for the attack was claimed by the Pakistan based Islamist militant group Jaish-e-Mohammed. The attacker was Adil Ahmad Dar, a local former of Pulwama district, and a member of Jaishe-mohammed group. India has blamed Pakistan for the attack. Pakistan condemned the attack and denied any connection to it. On 19 february 2019, Pakistani prime minister Imran Khan said that, "providing safe heaven to terrorists was not in pakistani's interest". He also asked for proof of pakistan's involvement in the attack and moreover, warned India that any military response would be met with retaliation. Iran's deputy foreign minister Abbas Araghchi met with India's External affairs minister Sushma Swaraj and referring to both the 2019 Pulwama attack and 2019 kashzahedan suicide bombing, he stated that Iran and India would work together to prevent future attacks.

> Mandeep Kaur URN: 1901252 CSE, 1<sup>st</sup> Year





### **DIVING INTO FUTURE: A.R. & V.R.**

Augmented Reality (AR) and Virtual Reality (VR) bridge the digital and physical worlds. They allow you to take in information and content visually, in the same way you take in the world. AR dramatically expands the ways our devices can help with everyday activities like searching for information, shopping, and expressing yourself. VR lets you experience what it's like to go anywhere from the front row of a concert to distant planets in outer space. VR change your reality.

### History:

"Virtual" has had the meaning of "being something in essence or effect, though not actually or in fact" .The term "virtual" has been used in the computer sense of "not 1970s. The term "virtual reality" was first used in a science fiction context in The Judas Mandala, a 1982 novel by Damien Broderick. Augmented Reality:

Augmented Reality overlays digital content and information onto the physical world — as if they're actually there with you, in your own space. It is an interactive experience of a realworld environment where the objects that reside in the real world are enhanced by computer-generated perceptual information, sometimes across multiple sensory modalities, including visual, auditory, haptic, somatosensory and olfactory. An augogram is a computer generated image that is used to create AR. Augmented reality is used to



physically existing but made to appear by software" .The term "artificial reality", coined by Myron Krueger, has been in use since the

enhance natural environments or situations and offer perceptually enriched experiences. With the help of advanced AR technologies





(e.g. adding computer vision, incorporating **AR** cameras into smartphone applications and object recognition) the information about the surrounding real world of the user becomes interactive and digitally manipulated.

#### **Applications:**

In google lens we can search for anything by showing the picture of thing we want to search. AR is in Pokemon Go game created by Niantic Labs.It is also used in mobile cameras to show the details about things we can see in camera. **Virtual Reality:** 

Virtual Reality (VR) is a simulated experience that can be similar to or completely different from the real world. A person using virtual reality equipment is able to look around the



artificial world, move around in it, and interact with virtual features or items. The effect is commonly created by VR headsets consisting of a head-mounted display with a small screen in front of the eyes, but can also be created through specially designed rooms with multiple large screens. Virtual reality typically incorporates auditory and video feedback, but may also allow other types of sensory and force feedback through haptic technology. In projector-based virtual reality, modeling of the real environment plays a vital role in various virtual reality applications, such as robot

TECHNICAL SECTION

navigation, construction modeling, and airplane simulation. Image-based virtual reality systems have been gaining popularity in computer graphics and computer vision communities.

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#### **Applications:**

Virtual Reality can include entertainment (i.e. video games) and educational purposes (i.e. medical or military training).



Ready Player One movie is also very good example of Virtual Reality.

### **Conclusion:**

In near future AR and VR are going to rule the technological world. They are going to take gaming and entertainment to an added level. Although there are many advantages of this technology there are also some drawbacks like eye fatigue, virtual reality sickness. But we can overcome these drawbacks by maintaining some rules and regulations.

### **References:**

1. "AR and VR", <u>arvr.google.com</u>2."History AR/VR", wikipedia.com

> Prikshit Kamal URN: 1801279, CRN: 1070/18 CSE 2<sup>nd</sup> Year

43



### **ELECTRONIC VEHICLE REVOLUTION**

### Abstract:

In 2018, Our respected prime minister told that climate change is the "greatest threat to the survival and human civilisation as we know it" and this is true. We can see the effect of climate change in any field. As the stake of climate change is increasing and becoming a worldwide issue, the call for sustainable and environmentally-friendly solutions continue to mount. One industry where this has been quickly gaining traction over the years is transportation. Electric vehicles used to be an infeasible, luxury solution to managing climate change. However, with the advancements in battery technology and support from government bodies, a future full of electric vehicles are becoming more and more accessible. The research and development of EVs from private cars and scooters to buses,

ships, and planes are allowing more and more people to invest in and use environmentallyfriendly transportation options.

### **Description:**

As you listen and realize that changes take time but the hurdles that are coming in the road of full adoption of electric vehicles are as follows :-Changes take time

Encouraging people to switch to electric vehicles is at the heart of the government's efforts to tackle climate change and things seem to be moving in the right direction because of sales of electric vehicles up 70% on last year in the UK however these are still only relatively small gains. Bigger changes are needed to meet the government's net-zero carbon emission target, starting with improved infrastructure (more EV charging points). Indian government gives





subsidy for purchasing an EV but in the Indian market, no EV has a good range. So, there is a need for making good range cars and also fast charging like Tesla doing.

### Limited Choice

The variety of EV present in the market are a few with a high price and low range and after discharging they require a minimum time of 8 hours charging which is not good to shift to EVs. The leading company in EVs is Tesla and performing very good in this field. Tesla Model 3 and their upcoming vehicles have a very good range and also supports fast charging but lack of public charging station is playing a negative role.

Backing the right technology

There has been accelerated developments in battery and charging technology, but where will people charge them, especially those without a driveway or designated parking space. The expense of battery technology is one of the major challenges the industry faces. Electric cars could also be less expensive if the markers could ramp up the production volume and use economics of scale. However, for this to happen more consumers need to buy electric cars in the first place which won't happen without prices coming down.

### Who will pay?

It has been widely assumed that both the private sector and local councils will build, operate and maintain charging infrastructure but the question here is who will pay for those infrastructures. Yet, this is slowly changing with BP and Shell taking over as market leaders, while Tesla is putting its charging network in place at service stations. The zero-carbon fantasy

A world in which all vehicles are electric is not the total zero-carbon solution. True, EVs don't produce the same emissions but there would still be an environmental cost. Sourcing minerals for batteries and dismantling old ones, as well as delivering and building vehicles all involve substantial CO2 emissions.

Tesla is a leading brand of EVs and doing very well. Tesla has 4 Gigafactories where EVs are mass- produced and their plan to build 20 Gigafactory. Tesla also establishes a joint venture with Panasonic to produce battery cells at Tesla Gigafactory 2. Tesla has also some good EVs which provides a good range and relatively low cost. Tesla also owns superchargers where you can charge your EV up to 80% in just 30 minutes. Tesla recently bought Maxwell Technology to improve its battery cells. But in India, Tesla doesn't have any Gigafactory and any type of supercharger point. There are rumors that Tesla is going to build its fifth Gigafactory in India which is good for us and it helps to achieve the goal of government to reduce the carbon emission.

### Future:

Norway is leading the way for zerotransmission transportation. A huge reason for this success is substantial incentives from the government. These include VAT exemptions and cheaper ferry, parking, and toll fees for electric vehicles. Charging





stations are also publically available along major roads. These initiatives form the administration are crucial to creating an environment that can support electric transportation. Even if all cars were electric, the infrastructure to support this must be present. In Norway, 98% of electricity production comes from renewable sources, ensuring that this move towards greenenergy is all-rounded.

### **Conclusion:**

India as well as remaining countries should follow Norway in EVs adoption and the incentives taken by Norway government. However, the Indian Government also provides some incentives like providing subsidy for buying an EV but lack of public charging stations and other obstacles don't let boost the presence of EVs in the Indian market.

Hope that Indian car company, as well as global vehicle company, invest in India and another third world countries in EV field to reduce the carbon emission in those areas because EVs successes only if those are adopted in third world countries also.

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TECHNICAL SECTION

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### CORBA TECHNOLOGY

CORBA mainly stands for "COMMON OBJECT REQUEST BROKER ARCHITECTURE ". It is technology to communicate two object of heterogeneous types. It is mainly developed by OMG (OBJECT MANAGEMENT GROUP). OMG is group of 11 eleven companies which was established to implement corba technology.

CORBA describes a messaging mechanism by which objects distributed over a network can communicate with each other irrespective of the platform and language used to develop those objects.

The main aim of CORBA is to:

Make better distributed system.

Allow objects in different programming languages to communicate with each other. It enables separate pieces of software written in different languages and running on



46



Advantages	Disadvantages
Data is in the correct format when it is received from the ORB. This saves time from having to parse XML.	Data cannot be read by humans alone. Because it is in the correct/digital format.
Standard specification, which is Defined by the OMG.	Protocol(IIOP)does not easily transport over the internet. This limits the scope of where CORBA can be used. ORB must be present on all machines, or elaborate coding is required to workaround.
Readable Interface Descriptions. SOAP wsdl files are difficult to read through.	Does not directly support .NET.
Supports various events, i.e. transaction, notification, security services.	Cannot transport some types of documents easily, such as .pdf or .doc files.

different computers to work with each other like a single application or set of services.

CORBA implementation comes with a tool called IDL (interface definition language) compiler which converts the user's IDL code into some language specific generated code. A traditional compiler then compiles the generated code to create a linkable object files for the application.

### Architecture of CORBA:

This diagram illustrates how the generated the code used within CORBA is infrastructure. On the client side, the application includes a reference for the remote object. The object reference has a stub method, which is a stand-in for the method being called remotely. The stub is actually wired into the ORB, so that calling ORB's invokes the connection it capabilities, which forwards the invocation to the server.

On the server side, the ORB uses skeleton code to translate the remote invocation into a method call on the local object. The skeleton translates the call and any parameters to their implementationspecific format and calls the method being invoked. When the method returns, the skeleton code transforms results or errors, and sends them back to the client via the ORBs. Between the ORBs, communication proceeds by means of a shared protocol, IIOP--the Internet Inter-ORB Protocol. IIOP, which is based on the standard TCP/IP internet protocol, defines how CORBAcompliant ORBs pass information back and forth. Like CORBA and IDL, the IIOP standard is defined by OMG, the Object Management Group.

> Tushar Saini URN: 1702058 CRN: 1104/17 CSE 3<sup>rd</sup> Year





### **MACHINE LEARNING**

"Computers are able to see, hear and learn. Welcome to the future."

Machine Learning is a core sub-area of Artificial Intelligence (AI). ML applications learn from experience (well data) like humans without direct programming. When exposed to new data, these applications learn, grow, change, and develop by themselves.

Machine Learning is, undoubtedly, one of the most exciting subsets of Artificial Intelligence. It completes the task of learning from data with specific inputs to the machine. It's important to understand what makes Machine Learning work and, thus, how it can be used in the future. The Machine Learning process starts with inputting training data into the selected algorithm. The Machine is provided with the same set of input again and again in order to train the Machine for specific task. To test whether this algorithm works correctly, new input data is fed into the Machine Learning algorithm. The prediction and results are then checked.

If the prediction is not as expected, the algorithm is re-trained multiple numbers of times until the desired output is found. This enables the Machine Learning algorithm to continually learn on its own and produce the most optimal answer that will gradually increase in accuracy over time.

Machine Learning is further divided into three types: **Supervised Learning:** 

In supervised learning, we use known or labelled data for the training data. Since the data is

known, the learning is therefore, supervised, i.e. directed into successful execution.

### **Unsupervised Learning:**

In unsupervised learning, the training data is unknown and unlabelled - meaning that no one has looked at the data before.

### **Reinforcement Learning:**

The algorithm discovers data through a process of trial and error and then decides what action results in higher rewards. Three major components make up reinforcement learning: the agent, the environment, and the actions. The agent is the learner or decision-maker, the environment includes everything that the agent interacts with, and the actions are what the agent does.

Machine Learning is widely used nowadays due to rapid increase in demand for trained machines. Machine Learning plays an important role in corporate sector, most of the companies are hiring Machine Learning Developers. The implementation of Machine Learning concept we see in our day to day life either that is web search results, real-time ads on web pages and mobile devices, email spam filtering, network intrusion detection, and pattern and image recognition. All these are by-products of using Machine Learning to analyse massive volumes of data.

There are high chances for increase in demand of Machine Learning in upcoming future due to the trend of Artificial Intelligence.

> Mohit Singh Jaggi URN: 1702011, CSE 3rd Year





### **SOPHIA: FIRST HUMANOID ROBOT**

### Abstract

Sophia is the first social humanoid robot made by Hanson Robotics situated in Hong Kong. She was first activated on February 2016 and made her first public appearance at Southwest Festival (SXSW) in mid-March 2016 in Austin, Texas, United States. She is able to display more than 60 facial expressions. Sophia has been covered by media around the globe and has participated in many high-profile interviews. In October 2017, Sophia became a Saudi Arabian citizen, the first robot to citizenship of any country. In November 2017, Sophia was named the United Nations Development Programmer's first ever Innovation Champion, and is the first non-human to be given any United Nation title.

#### **Description:**

Sophia was activated on 14<sup>th</sup> February 2016. The robot, modelled or made on the basis of an ancient Egyptian Queen Nefertiti, is known for human-like appearance and behaviour compared to previous robotic variants. According to the manufacturer, David Hanson, Sophia uses artificial intelligence, visual data processing and facial recognition. Sophia also imitates human gestures and facial expressions and is able to answer certain questions and to make simple conversations on predefined topics (e.g. on the weather). Sophia uses voice recognition (speech-to-text) technology



from Alphabet Inc. (parent company of Google) and is designed to get smarter over time. Her speech-synthesis ability is provided by Cereproc's Text-to-Speech engine and also allows her to sing. Sophia's intelligence software is designed by Hanson Robotics. The AI program analyses conversations and extracts data that allows it to improve responses in the future.

#### **Conclusion:**

Cameras within combined with computer algorithms allow her to see. She can follow faces, sustain eye contact, and recognize individuals. She is able to process speech and have conversations using a natural language subsystem. Around January 2018 Sophia was upgraded with functional legs and the ability to walk.

> Shreyank URN: 1901285 CRN: 1095/19 C.S.E 'B' 1<sup>st</sup> Year





### **WORM HOLE**

A Worm Hole is a structure linking different points in space and time. It is visualised as a tunnel with two ends in different location or different time. It is based on the special solution of the Einstein field equations. Wormholes are also based on general theory



of relativity, but whether wormholes actually exist remains to be seen. Wormholes are assumed to be 4- Dimensional. A wormhole could connect extremely long distances such as a billion light years or more, short distances such as a few meters and different universes. It can also make you travel from one time period to another.

To imagine the working of a worm hole, take a sheet and a pencil. Now draw two points on the at some distance. The sheet of paper



represents a plane in the space-time and the two points represent a distance to be travelled. Now fold the paper and insert the

pencil from one point and remove it from the other. Let it be stuck between the points. The



pencil represents a worm hole. So instead of going from one point of the point to the other in the plane, we take a shortcut route indicated by the pencil.

The idea of a worm hole existing was proposed by Hermann Weyl in 1928, though at that time he called it one- dimensional tubes. The term "Wormhole" was coined by John Archibald Wheeler in 1957. A worm hole could enables us to travel with a speed faster than light. It could also let us travel through different timelines. Worm holes might help us to travel from one galaxy to another and help us explore the universe. People may have still not been through a worm hole, as worm holes are yet to be seen and explored, the practical applications of worm holes can be seen in many different science-fiction movies. It has served as the method of time and distance travel. The discovery of a real worm hole would be revolutionary for mankind.

> Divyapratap Singh URN: 1901231 CRN: 1038/19 CSE 'A' 1<sup>st</sup> Year





### **HOPE: THE LESSON FROM WARRIORS**

When you recover, what will you do? When you recover, will you still be you? Will you be stronger, will you be new, When you recover from what you've been through?

Can life get better than it was before? Will you realize your dreams and improve your score? Will people still remember your name? Or will they forget you because they're ashamed?

Life in recovery may not be the same. The rules may have changed in this brand new game. You can pick up the pieces and make a new start, And courage and hope keep you from falling apart.

The world all-around you seems different and changed. Things that once were now seem out of range, But you can recapture your life and fulfil The dreams that were lost when you took ill.

The journey to wellness takes time and is long, And those that get well are exceptionally strong. For depression can kill, but you have survived. Your goal to recover has kept you alive.

Now you're recovered, what will you do? You suffered and conquered and saw it through. Back from the black and abyss of despair, It is time to move on; it is time to care!

> Kanika Sharma URN: 1701926 Biotech, 3<sup>rd</sup> Year





### **DOS ATTACK**

A denial-of-service attack (DoS attack) or distributed denial-of-service attack (DDoS attack) is an attempt to make a computer resource unavailable to its intended users. Although the means to carry out, motives for, and targets of a DoS attack may vary, it generally consists of the concerted efforts of a person or people to prevent an Internet site or service from functioning efficiently or at all, temporarily or indefinitely.

There are two general forms of DoS attacks: those that crash services and those that flood services. One common method of attack involves saturating the target machine with external communications requests, such that it cannot respond to legitimate traffic, or responds so slowly as to be rendered effectively unavailable. In general terms, DoS attacks are implemented by either forcing the targeted computer to reset, or consuming its resources so that it can no longer provide its intended service or obstructing the communication media between the intended users and the victim so that they can no longer communicate adequately.

#### **Description:**

DOS attacks are not new; in fact, they have been around for a long time. However, there has been a recent wave of Distributed Denial of Services attacks, which pose a great threat to Security and are on the verge of overtaking Viruses/Trojans to become the deadliest threat to Internet Security. Now what is commonly being done is, say a group of 5 Hackers join and decide to bring a Fortune 500 company's server down. Now each one of them breaks into a smaller less protected network and takes over it. So now they have 5 networks and supposing there are around 20 systems in each network, it gives these Hackers, around 100 systems in all to attack from. So they sitting on their home computer, connect to the hacked less protected Network, install a Denial of Service Tool on these hacked networks and using these hacked systems in the various networks launch Attacks on the actual Fortune 500 Company.

This makes the hackers less easy to detect and helps them to do what they wanted to do without getting caught. As they have full control over the smaller less protected network they can easily remove all traces before the authorities get there. Not even a single system connected to the Internet is safe from such DDOS attacks. All platforms including Unix, Windows NT are vulnerable to such attacks. Even MacOS has not been spared, as some of them are being used to conduct such DDOS attacks.

### **Conclusion:**

DDos attack tools are readily available and any internet host is targetable as either a zombie or the ultimate DDos focus. These attacks can be costly and frustrating and are difficult, if not impossible to eradicate. The best defense is to hinder attackers through vigilant system





administration. Applying patches, updating antimalicious software programs, system monitoring, and reporting incidents go further than retarding DDos attacks – these defenses also protect against other attacks. The Internet is not stable-it reforms itself rapidly. This means that DDoS countermeasures quickly become obsolete.

> Amninder Singh URN: 1801223, CRN: 1014/18 C.S.E. 'A', 2<sup>nd</sup> Year



Prateek Singh Saini URN: 1901267 CSE, 1<sup>st</sup> Year

### NATURE AND TECHNOLOGY ARE MERGING

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The 21<sup>ST</sup> Century will challenge everything we think we know about nature and technology. Thank you to the new tools and technology and swift advances in our ability. Our machines are becoming more biological. They can think, sense, communicate and react to the world. Thanks to the ubiquity of wireless networks, our gadgets can now connect into new kinds of ecosystems.

In short: the line between the biology and technology is beginning to blur, and it could mean the beginning of new industrial revolution. The technological developments happening now could lead to a world where we replace chemical factories with microbial communities.

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### SYNTHETIC EVOLUTION: MANIPULATION OF GENES AND GENOMES TO UNDERSTAND THE EVOLUTION OF GENE EXPRESSION

The precise manipulation of genes and genomes has been increasingly enabled with the advent of modern biotechnologies such as DNA synthesis, CRISPR-based editing and next-generation high throughput sequencing. Along with rational design, these technologies do enable the targeted and potentially continuous introduction of multiple mutations. While this might seem to be merely a return to natural selection, the ability to target evolution greatly reduces fitness burdens and focuses mutation and selection on those genes and traits that best contribute to a desired phenotype, ultimately throwing evolution into fast forward. Synthetic biology has progressed to the point where genes that encode whole metabolic pathways and even genomes can be manufactured and brought to life. This impressive ability to synthesize and assemble DNA is not yet matched by an ability to predictively engineer biology. These difficulties exist because biological systems are often overwhelmingly complex, having evolved to facilitate growth and survival rather than specific engineering objectives such as the optimisation of biochemical production. A promising and revolutionary solution to this problem is to harness the process of evolution to create microbial strains with desired properties. The tools of systems biology can then be applied to understand the principles of biological design, bringing synthetic biology closer to becoming a predictive engineering discipline.

One of the fundamental predictions of evolutionary theory is that protein expression levels are optimized during evolution to maximize fitness in a given environment. However, fitness as a function of expression level is rarely measured. Synthetic biology allows researchers to design simple genetic circuits where the expression level of a protein (or proteins) of interest can be precisely tuned to measure organism fitness across a range of expression levels.

The construction of synthetic versions of natural circuits is a powerful way to interrogate questions of 'why' in biology. Re-engineering approaches can also be used to resolve the potential functional advantages of the observed complexity of many genetic circuits found in nature. Progress in synthetic biology will allow more far-reaching questions to be investigated in the evolution of gene expression and regulation. Several technological driving forces are enabling researchers to design and construct larger and more complex biological systems. For example, the process of physically synthesizing and assembling pieces of DNA is rapidly becoming cheaper, faster, and more accessible to a wider range of laboratories. These technological advances will make it possible for a standard molecular biology laboratory to redesign and build entire chromosomes or genomes with reasonable labor and time investments.

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The ability to design and build biological systems at the genomic scale will open new avenues for studying how selective forces shape the patterns of gene expression, regulatory control and genome architecture. For example, the adaptive value of features, such as operon organization, presence of introns, antisense transcription, and overlapping genes could be assessed by synthesizing entire genomes or subsets of genomes that lack or reorganize these features.

The expanding ability to design and manipulate genetic regulatory schemes in living cells will allow biologists to tackle important questions in the evolution and emergence of gene expression control. There are several emergent features of biological systems that have been hypothesized to be favored in evolution, such as the modularity of regulatory and protein interactions, the robustness to environmental and mutational perturbations, and the ability of a regulatory network to foster evolvability. Construction of biological systems will also allow for the parsing of the relative contributions of other mechanisms of diversity generation, such as protein-domain duplication and non-coding RNA control. The design, synthesis and analysis of synthetic genomes with alternative genetic regulatory organization could become a powerful tool in asking precisely why the systems-level features we observe in biology have appeared throughout evolution.

> Manila Kashyap Assistant Professor, Department of Biotechnology BCET,Gurdaspur

### **BLACK HOLE**

BLACK HOLES are one of the strangest things in existence. Black hole is a dead star having infinite mass density exhibiting gravitational acceleration so strong that nothing (no particles or even electromagnetic radiation



such as light) can escape from it. The boundary of the region from which no escape is possible is called the event horizon or saturation point. It reflects no light. Black holes are formed when a massive star collapse at the end of their life cycle. A black hole grows by absorbing mass from its surrounding.







Black holes may even eat other stars and merge with other black holes. By absorbing other stars and merging with other black holes, supermassive black holes of millions of solar masses may form.

It is assumed that super massive black holes are present in the center of most galaxies. When matter falls into black hole, it experiences a lot of friction causing the matter to shine bright. If there are other stars orbiting a black hole, their orbits can be used to determine the black hole's mass and location.

Scientists have obtained the first image of a black hole, using Event Horizon Telescope



observations of the center of the galaxy M87. I was captured on 19 April, 2019. Only the event horizon is the visible part in a black hole. Rest it is all black.

The experience of time is different around a black hole. From the outside you seem to slow down as you approach the event horizon, while from your prospective you can see the world in fast forward. According to Einstein theory of relativity, time slows down around heavy objects. This is a reason why the time around a black hole slows down. Once you cross the event horizon, there is only one possible direction that is toward the core of the black hole. The gravity is infinite around a black hole. Even the forward moment of few centimeters can increase the gravity millions of time more than before. Currently the largest super massive black hole known is S5 0014+81, 40 billion times the mass of our sun. All the black holes eventually evaporate over time through a process called Hawkins Radiation. Black holes constantly lose an extremely tiny amount of their mass. It causes black hole to loose energy. This happens incredibly slow at first and gets faster when the black hole becomes smaller. The black hole then vanishes completely in space with a super massive explosion.

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Mukul Chambial URN: 1901259 CRN: 1066/19 CSE 'B' 2<sup>nd</sup> Sem.







### **REMEMBER WOMAN!!**

Remember, Woman, you were born life giver, miracle creator, magic maker. You were born with the heart of a thousand mothers, open and fearless and sweet. You were born with the fire of Queens and conquerors, warrioress blood you bleed. You were born with the wisdom of sages and shamans, no wound can you not heal. You were born the teller of your own tale, before none should you kneel. You were born with an immeasurable soul reaching out past infinity. You were born to desire with passion, abandon, and to name your own destiny. Remember, Woman, remember you are more than you can see. Remember, Woman, remember you are loved endlessly. Remember, Woman, your power, and grace, the depth of your deep sea heart. Never forget you are Woman, divine, as you have been from the start.

> Sakshi Mahajan URN: 1701938 BioTech, 3<sup>rd</sup> Year







### **CORONAVIRUS COVID-19**

### ABSTRACT

Coronavirus are comes under a broad family of virus that can cause respiratory illnesses such as the common cold, according to the Centers for Disease Control and Prevention (CDC). Coronavirus are comes under a broad group of viruses that belonging to the which nidovirales order. includes coronaviridae, arteriviridae and roniviridae families. These viruses are responsible for between 15 and 30 percent of common colds. Over the last 70 years, scientists have found that corona viruses can infect mice, rats, dogs, cats, turkeys, horses, pigs and cattle.

#### DESCRIPTION

The name "coronavirus" is derived from the Latin 'corona' and the Greek"korone" ("garland, wrealth"), meaning crown or halo. Coronavirus are a group of viruses that causes diseases in mammals and birds.

In humans, coronaviruses causes respiratory tract infections that are typically mild, such as the common cold. As a group of viruses that is zoonotic in nature, coronaviruses are transmitted between animals and birds.

The novel coronavirus (nCOV) is said to have originated from a seafood market in China's Wuhan where wildlife was reportedly sold illegally. It is not known yet which animals are responsible through many reports suggest it to be Bat or Snakes. MERS and SARS these two are more dangerous types: MERS-CoV, which causes Middle East Respiratory Syndrome (MERS), was first recognized in 2012. SARS-CoV, which causes Severe Acute Respiratory Syndrome (SARS).

#### CONCLUSION

Basic Hand Hygiene and Respiratory Hygiene To protect yourself if against apotential animal source

Covering mouth and nose with a tissue when we cough or sneeze

Both the MERS-CoV and H5N1 Virus have pandemic risk potential which remains unpredictable.

### Ashish Kumar URN: 1702133 Mechanical Engg. 3<sup>rd</sup> Year



Nandini URN: 1702016 CSE, 3<sup>rd</sup> Year



58



HUMANITY ON ACHIEVING THE TECHNOLOGY OF STARS: NUCLEAR FUSION

#### Abstract:

These days, Humanity faces one of the biggest problems which is Pollution. We burn fossil fuels and that returns us energy as well as a various variety of pollution. Think a technology which gives us a huge amount of energy without pollution. This technology is very old but for Homosapien's, that is new and still under research and that is the technology of Stars: Nuclear Fusion.

#### Introduction:

Nuclear Fusion is a process in which light elements nuclei reacts to form heavier elements (up to iron) and releases a substantial amount of energy free of pollution, where the interacting nuclei belong to elements with low atomic numbers (e.g. hydrogen [atomic number 1] or its isotopes deuterium and tritium). The vast energy potential of nuclear fusion was first exploited in thermonuclear weapons, or hydrogen bombs, which were developed in the decade immediately following World War II. Meanwhile, the potential peaceful applications of nuclear fusion, especially given the essentially limitless supply of fusion fuel on Earth, have encouraged an immense effort to harness this process for the production of power.

#### **Description:**

Since, the time of World Wars, scientists have known that the Sun and other galactic giants generate their energy by nuclear fusion but that time we are busy in fighting with each other instead of trying to rent that technology from stars. After the end of World War II, the physicists imagined that what if fusion energy generation could be replicated in a controlled manner on Earth, it might very well provide a safe, clean and inexhaustible source of energy. The 1950s saw the beginning of a worldwide research effort to develop a fusion reactor.

In the late 1980s, an experimental reactor named the Tokamak Fusion Test Reactor (TFTR) built at Princeton Plasma Physics Laboratory (PPPL) and entered service in 1982. TFTR was designed with the explicit goal of reaching scientific breakeven, the point where the heat is released from the fusion reactions in the plasma is equal or greater than the heating being supplied to the plasma by external devices to warm it up but the TFTR never achieved this goal. <sup>[3]</sup> In the same decade. The Joint European Torus, or JET which was one of several tokamak reactors built in early 1980s that tested new design concepts, is the world's largest operational magnetically confined plasma physics experiment. The main purpose of this project is to open up a way to future nuclear fusion grid energy. The TFTR and JET was one of only two designed to work with a deuterium-tritium fuel real mix. in somewhere JET was succeed in its motive and became the first reactor in the world to





run on the production fuel of a 50-50 mix of tritium and deuterium. JET also set the current world record for fusion output at 16 MW from an input of 24 MW of heating and a total input of 700-800 MW of electrical power but JET is unable to reach at point of scientific breakeven.

JET was built by an international consortium, which formed the nucleus for the European Union's contribution to the International Thermonuclear Experimental Reactor (ITER). The ITER thermonuclear fusion reactor has been designed to produce a fusion plasma equivalent to 500 megawatts (MW) of thermal output power for around twenty minutes while 50 megawatts of thermal power are injected into the tokamak, resulting in a ten-fold gain of plasma heating power.

Thereby the machine aims to demonstrate



**International Thermonuclear Experimental** 

Reactor the principle of producing more thermal power from the fusion process than is used to heat the plasma, something that has not yet been achieved in any fusion reactor. The total electricity consumed by the reactor and facilities will range from 110 MW up to 620 MW peak for 30-second periods during plasma operation. Thermalto-electric conversion is not included in the design because ITER will not produce sufficient power for net electrical production. The emitted heat from the fusion reaction will be vented to the atmosphere. Since, this project is an





international venture and funded by seven member entities and luckily India is also a part of this venture and the other members are the European Union, Japan, China, Russia, South Korea and the United States. The European Union is the host party for the ITER complex is contributing about 45 % of the cost with the other six parties are contributing approximately 9% each. Construction of ITER tokamak complex started in 2013 and the building costs were over US\$14 billion by June 2015. The construction of the facility is expected to in 2025 be completed when commissioning of the reactor can commence. Initial plasma experiments are scheduled to begin in 2025, with full deuterium-tritium fusion experiments starting in 2035. If ITER becomes operational, it will become the largest magnetic confinement plasma physics experiment in use with a plasma volume of 840 cubic meters, surpassing the Joint European Torus by almost a factor of 10. The goal of ITER is to demonstrate the scientific and technological feasibility of fusion energy for peaceful use. It is the largest of more than 100 fusion reactors built since the 1950s. ITER's planned successor, DEMO, is expected to be the first fusion reactor to produce electricity in an experimental environment. DEMO's anticipated success is expected to lead to full-scale electricity-producing fusion power stations and future commercial reactors. There are so many ongoing

similar projects like EAST, SST-1, KSTAR, MAST as well as CFETR (China Fusion Engineering Test Reactor).

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#### **Conclusion:**

If we succeed in renting the technology of Stars then we have an limitless source of clean energy and in the near future we need this source of energy for our survival because all sources of fossil fuels are going to end and if we have any type of fossil fuel then in future we are not in a position to use that source of fossil fuel because of and for extreme pollution space exploration and for making Humanity a interstellar species and may be a galactic species we have to get that source of energy.

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Rashmi Raj URN: 1801286 CRN: 1077/18 CSE 2nd Year





### **BIOTECHNOLOGY: TO THE FORE**

Biotechnology is much in vogue these days. Over the years, the field has become a popular career option for students because of the various opportunities that it provides. It is an interdisciplinary subject which is a combination of biological sciences and engineering technologies. It involves the development of high-quality products and techniques through the use of living systems and organisms.

As a human being if we had the opportunity to work with nature, to create within it instead of destroying it, we should take it. One of ways to serve mankind and nature is Biotechnology. Although there are countless research areas in this field but I want to divulge about the Biotechnological technique involve Bio-Engg. or recombinant DNA technology to make Genetically Modified Organisms.

To understand how all these things happen, let us take a brief view, how cells, the smallest structural and functional unit of the body works. It carries out thousands of metabolic processes with the help of proteins. The designs or the instructions of these machines are contained in the code known as DNA. And this is the heart of biotechnology that if we make new instructions, we can build new machines or we can use existing instructions and combined them in new ways for a new purpose. The process of developing new instructions of a GMO can be called either as genetic engineering, metabolic engineering, synthetic biology or applied biology. Now let us talk about, how GMOs are helpful for nature as well as for living organisms. One thing can be

TECHNICAL SECTION

beautiful in the way it is designed, the way it is integrated, and the processes that take place to produce it. The following are some examples of GMOs. Insulin, this is a sugar uptake medicine for diabetics. It is produced in animal cells. To extract it, we have to grind a lot of animal tissues to extract the protein that we needed. But these days, using GM bacteria we can grow these in a broth of sugar and nutrients. It is incorporating in the production of biopharmaceuticals.

Across 600,000 people in the world are suffering from vision problems. One source of vision problem is the deficiency of vitamin A or micronutrients. To fix them we need to provide specific nutrients in the form of pills or medicine. But pills can often be too expensive for poor families so, the best way to do this is to incorporate it into the diet. Nowadays Golden rice is a genetically modified crop, they are genetically engineered in such a way that it contains Vitamin A.

Many other species are genetically modified for the benefit of mankind and are eco-friendly to nature. At last I conclude that Biotechnology is still at a nascent stage but the opportunities offered by the field are endless. With its application in different industries, the demand for biotechnology experts is only going to grow. Moreover, in the past decade, the Government of India has established many reputed departments and institutions, which will further boost the popularity of this subject.

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### **SUN AND LIGHT**

A photon of light takes only 8 minutes 20 seconds to get to the earth from the sun. But it can take 100,000- 170,000 years from the core of the sun to get to the surface – where it bursts out and flies at the speed of light. The density of the core is high 150 times greater than water. By nuclear reaction sun produce light.

Now question rise why this process is too slow? What happens with the light ?



As the scientists explain: particles of light from atoms undergoing nuclear fusion in the sun's innermost layer (core). It eventually bursts past the sun's surface, called the photosphere, and rises into the solar atmosphere. This is how light travels through the layes of the sun.

But question remain the same why does it takes a photon so long to reach the surface of the sun?

The atoms, mostly hydrogen are fully stripped of electrons so that the particles

density is 10<sup>26</sup> protons per cubic centimetre that means the distance b/w the proton and electron is about 2\*10<sup>-9</sup>cm. This means that to travel the radius of the sun, a photon will have to take  $(696,000 \text{ km/cm})^2 5*10^{21} \text{ steps}$ . This will take 1.5\*10<sup>7</sup> seconds in year, it get about 4000 years. But it depending on what is assumed for the mean free patch. Also the interior of the sun is not at constant density so that the steps taken in the outer half of the sun are much larger than the deep interior where the densities are highest. These estimates shows that the emission of light at the surface can lag the production of light at the core by up to 1 million years. It takes long time for light to leave the sun's interior.....

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