

NEWSLETTER - DEPARTMENT OF MATHEMATICS. JMC

## Sunday, 27 October 2019 10:30 p.m.

Dear Diary, Tis the season!

Tis the season!

Finally, the time of festivities! Ultracolourful lights and embellished decorations flooding the local markets. Ethnic Bandhani boxes of boondi and besan laddoos being cherished at everyone's place.

Diwali Melas and Dilli Haat are the lifelines of Delhi. The delicious street food stalls, the hand-crafted bandhanwars and home decoration tems, the aesthetic Indian wear and emporium stalls, selling Kanjivaram sarees and lehengas, are the highlights of them. These fun fairs are one of the most awaited parts of the bright and pompous festivities for me!



ILLUSTRATION BY: SHRUTI KEDIA & SUHANA DHINGRA

Today, when I visited the wondrous Sundar Nagar Diwali Mela and stepped in through the huge gate of the fair, thronged with queues of excited people, I was left awe-struck by the giant and decorated roller coaster. Roller coaster rides, with their innumerable twists and turns, have the best thrilling experience! This year, I had decided to ride it, no matter what. The infinitely long queues at the ticket distribution counter, impelled me to skip the ride, but I treated myself to a plate of pay bhaji. My wish to be a part of that joyous roller coaster ride remained a dream that could not be fulfilled, yet again.

The heart desires the most for the things that one cannot easily get, human nature, you see!

#### Friday, 13 December 2019 7:30 p.m.

Dear Diary,
Finally my first semester exams are done!! I have written and presented all my hard work on those white-ruled sheets. Just hoping that my diligence pays off with amazing results! Today when we stepped out of the exam hall, we had a lighter head and a happier heart. With some pretty pictures clicked with our best friends, we bid off the semester on a happy note.

Today, my mind trails me back to the days when I had entered the college world; the first few days of college when we could not even figure out our route to 401. The days when all of us, coming from different schools, sat together in the mathematics department, not knowing each other at all. The days when we just went back home clueless about where to get the correct readings from. And how such utter confusions and doubts cleared and made room for satisfaction and happiness about being a part of JMC and pursuing this course in literally no time. The school nostalgia quickly diminished as college started becoming my happy place!

The bloomed pink tree waived at us wishing for a relaxing break, while we walked under the tree and out of the college. So now we meet next semester,

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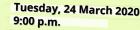
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## Friday, 6 March 2020 6:30 p.m.

Dear Diary, "Left", drum beats and continuous practice in our sports "Left, Right, Left", drum beats and continuous practice in our sports Day! The field, the heart of JMC, were tested today. It was Sports Day! The finale of our hard work, when we had to match our steps and march finale of our hard work, when we had to match our steps and march with pride for our department. Our performance made us feel with pride for our department, it?

And with this, we complete half of this semester and begin our beloved mid-sem break. A break that helps us re-energize ourselves that has been done in the past half-energize the syllabus that has been done in the past half-energize the syllabus that has been done in the past half-energize the syllabus that has been done in the past half-energize the syllabus that has been done in the past half-energize the syllabus that has been done in the past half-energize the syllabus that has been done in the past half-energize the syllabus that has been done in the past half-energize the syllabus that has been done in the past half-energize the past half-energize the syllabus that has been done in the past half-energize the past half-energize the syllabus that has been done in the past half-energize the past half-energize the syllabus that has been done in the past half-energize the past half-energize the syllabus that has been done in the past half-energize the past half-energize the syllabus that has been done in the past half-energize the past half

.....until next time!



Dear Diary,

Dear Diary, The mid-sem break that was supposed to end in a super short span of just one week, got extended due to COVID-19. Seems like the virus has begun to set its feet firmly in the nation. Two days back, a Janta curfew was announced along with an activity to praise the COVID warriors through clanging utensils, ringing bells and clapping- to be performed at 5 in the evening for 5 minutes. You know what, all this was such a new and unimaginable concept! We had to stay completely inside our homes for one day- no walking in the verandah or gardens, no visit to the nearby shops, nothing at all. It feels as if a war has been declared against the invisible coronavirus.

Today, at 8, millions of TV screens were turned on to hear the PM's address- a 21-day lockdown! How to react to this? Should I be happy that I've got an extension to the mid-sem break? Or should I be sad that the virus has managed to strengthen its presence? Should I be glad that now I have more time to rejuvenate myself? Or should I be scared of the consequences of the lockdown in terms of losses the nation will suffer? Last year, I wanted to enjoy the roller coaster ride in the Sundar Nagar Diwali fair, remember? But could not ride it due to such long queues. Who would've ever thought that it will enter our daily lives and we will be riding on a roller coaster of events and emotions! This roller coaster takes a twist every second and leaves us confused about its path. Is it an upward cheerful ride or a low sad one? Time shall only tell!

Leaving the thoughts here.....and going to take some rest!



#### Sunday, 5 April 2020 10:30 p.m.

Dear Diary

Ever thought of having a Diwali celebration in the scorching heat of April? No, right? These were our exact thoughts when our PM asked us to light diyas and candles at 9 p.m. for 9 minutes, keeping all lights switched off inside our homes. It was such an unimaginable event! Watching friends, relatives and neighbours light diyas and candles to mark 11 days of lockdown, 11 days of no contact with anyone outside the walls of our homes, was nothing but phenomenal. And even though we've been far from each other, we're all united in this fight against an invisibly small virus. This activity really helped us gather a lot of positivity and spread it around us, and I already feel so much better!

When I came back to my room after having dinner, I was surprised to see 115 messages on the class WhatsApp group! Eagerly, I opened the chat and read about how everyone reacted to this activity. Can you believe that some people were so heavily dressed up as if it was actually Diwali?! We all surely had a good laugh over it! Oh, how delightful it was to talk to my friends with such enthusiasm after so long!



Wednesday, 22 May 2020 9:30 p.m.

Dear Diary, It has been 2 months since the lockdown commenced. Teachers have completed the syllabus via online classes. It feels so different. I miss the campus, It has been 2 months since the lockdown commenced. Teachers have completed the syllabus via online classes. It feels so different. I miss the campus, my friends, the fests, and attending classes leisurely. It is time for semester exams but there prevails some uncertainty. Deep down, I'm hoping that they're not held, but I'm still preparing for them. One could've never thought that life would take such a turn and everything will move onto the virtual platform. You know, it was my best friend's birthday the previous week. Oh my God!! We made detailed plans to make things interesting-we had a virtual platform. You know, it was my best friend's birthday the previous week. Oh my God!! We made detailed plans to make things interesting-we had a virtual platform. You know, it was my best friend's birthday the previous week. Oh my God!! We made detailed plans to make things interesting-we had a virtual platform. You know, it was my best friend's birthday the previous week. Oh my God!! We made detailed plans to make things interesting-we had a virtual platform. You know, it was my best friend's birthday birthday the previous week. Oh my God!! We made detailed plans to make things interesting-we had a virtual platform. You know, it was my best friend's birthday the previous week. Oh my God!! We made detailed plans to make things interesting-we had a virtual they're not have a virtual they're not had a vi

While watching the movie 'Contagion' 9 years ago, I guess, no one would've thought that that could possibly happen in the future. It almost looks like a prediction to me. I guess this is how Rapunzel must have felt when she was locked up in the tower. If you look at the bright side of it, I get to have endless movie marathons, laze around sometimes and most importantly, there is no hassle of waking up early and rushing to college to make it on time for the 8:30 class. Life has definitely become a little less stressful!



#### Sunday, 14 June 2020 9:00 p.m.

Dear Diary,

This week has been so eventful, and the good news is that our semester exams have been cancelled! Last Friday, I jumped out of joy reading the official notice. I literally messaged and called all my college friends and everyone was so overwhelmed! Now that our vacation has officially commenced, there are so many things I want to try. I'm planning to do an internship to gain experience. Maybe I can do something related to content writing or marketing? I better start researching for that.

Yesterday, we gave a virtual Farewell party to our seniors and it was so much fun! After such a long time, I could see all my teachers, seniors, and friends. Inspired by Bollywood, the theme was 'Lights, Camera and Graduation!'. Our seniors looked stunning in their beautiful sarees. The special video message from all the teachers made us a little too emotional. And to lighten up the mood, a series of song and dance videos were played. I've gotta say, it was actually a great experience on the virtual platform, and it felt good that we could at least give our seniors a party! The seniors expressed their heartfelt gratitude to all the teachers and shared some of their most memorable moments. They, then, grooved and enjoyed every moment of the DJ session, the grand finale of the event, acing the hook steps of all songs gracefully! It was nice to have a college event (after so long!), even if it was virtual. It just felt comforting to finally celebrate something together.

Thursday, 30 July 2020 10:00 p.m.

Dear Diary,

I have so much to tell you!! (sighs)

You know that I had applied for so many certificate courses during my free time in lockdown, from finance to advertising to during my free time in lockdown, from finance to advertising to marketing, just so that I can hone my skills. I was so hopeful to get an internship easily, as I met all their prerequisites, but to my saddest imagination, I did not even get a single response from the companies I had applied to. This is so disheartening. How will I enhance my CV? How will I update my LinkedIn profile? Seeing my friends and batchmates doing the best of internships every month, makes me feel that I definitely lag somewhere. I'm so confused and disappointed. I really want to talk to my friends but I'm worried that they might not talk to my friends, but I'm worried that they might not understand me. I can't help but wonder if I would've been in the same dilemma if they were right beside me.

It's all going into a spiral and I feel like I'm on the lowest point of a roller coaster and there is just no way to go up. I feel stuck, lost and helpless. All I need right now is a cup of coffee at our usual place with my tribe. But, of course, I can't have that because I feel like I don't deserve anything anything at all! Honestly, I just can't figure out what went wrong, everything is just all over the place. I'd stay in bed all day if I didn't tell myself, "Today is a new day. It doesn't have to be like yesterday". That's the usual lie I have been telling myself this for the last two weeks and and I continue saying it. With all the #lockdownproductivity theme that seems to be going on in every single person's life I know, it feels like I'm just not worth it. I just want everything to go back to the way it was. I want to have a routine, a goal and an inspiration. Deep down, I know that everything will be better soon, but I wish soon came sooner. Anyway, it does feel good to vent out. Thank you for always being there for me, Diary! Sunday, 2 August 2020

Dear Diary,
The usual routine of waking up late, skipping breakfast and directly having lunch,
The usual routine of waking up late, skipping breakfast and directly having lunch,
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to an end wit my biological clock. Gotta keep Crocin and eye drops handy now. But at the same time, I'm super excited to learn new concepts and meet my new teachers (and of course, the old ones!). Finally, the third semester will begin in full bloom, with our teachers teaching old ones!). Finally, the third semester will begin in full bloom, with our teachers teaching so us online through G-meet. It'll be an all-new educational experience, where reaching us online through G-meet. It'll be an all-new educational experience, where reaching so oline through G-meet. It'll be an all-new educational experience, where reaching on our laptops/phones college will not require traveling via car/metro, but just switching on our laptops/phones college will not require traveling via car/metro, but just switching on our laptops/phones college will not require traveling via car/metro, but just switching on our laptops/phones college will not require traveling via car/metro, but just switching on our laptops/phones college will not require traveling via car/metro, but just switching on our laptops/phones college will not require traveling via car/metro, but just switching on our laptops/phones college will not require traveling via car/metro, but just switching on our laptops/phones college will not require traveling via car/metro, but just switching on our laptops/phones college will not require traveling via car/metro, but just switching on our laptops/phones college will not require traveling via car/metro, but just switching on our laptops/phones college will not require traveling via car/metro, but just switching on our laptops/phones college will be no rush for the seaching via car/metro, but just switching on our laptops/phones college will be no rush for the seaching via car/metro, but just switching on our laptops/phones college will be not reaching via car/metro, but just switching on our laptops/phones car/metro and laptops/phones car/metro and laptops/phones car/metro and laptops/phones car/metro and laptops/phones car/metro and

So, kudos and welcome to new beginnings!!



Wednesday, 20 October 2020 10:00 p.m.

Dear Diary, After a long and tiring one and a half months of back to back online classes, Assignments, and tests, we finally head towards festivities! The Navratri week has already begun and I'm so excited for Durga Puja and Dussehra. I am looking forward already begun and I'm so excited for Durga Puja and Social distancing. I know it's pretty to celebrating festivals amid the pandemic and social distancing. I know it's pretty early, but I just can't wait for Diwali! Time really flies amidst these celebrations. Gotta go make my schedule for these upcoming days. I'm just so excited!!

CONTENT BY: HIMANI ARORA & CHRISTABELLE R. JOSEPH

### THE EDITOR'S DESK FROM

**Greetings Readers!** 

The year 2020 has been quite unusual and different from what any of us had expected. In spite of all the turbulence and upheavals, fortunately we have been bestowed with the opportunity to follow the footprints of our beloved torch bearers- Neha Sam, Ananya Mishra, Jessintha Mathew and Tanya Agrawal, and carry forth their legacy, their soul, "Algorithm".

Who could have ever envisioned that in today's world, we would witness a situation like this, wherein we all are confined to the boundaries of our homes. Thanks to Zoom, Google Meet, Houseparty and tons of other similar apps, we could give our seniors a glamorous farewell. Videochatting helped us break the monotony in our daily routines by adding lighthearted merriment. Technology surely proves to be a boon in such gloomy times, where we've had our disciplined lectures to fun filled moments. Nevertheless, our teaching faculty has left no stone unturned in the online lectures, overcoming all technical constraints and still giving us phenomenal tutorials.

For this edition, it has been our endeavour to capture the perceptions and thoughts on myriad fronts associated with this year. With the onset of the lockdown, everything has shifted to the virtual platform- from office meetings to exams- but can this lifestyle be adopted permanently?

While we guestion our new entirely-digitalised lives, we also ponder over the lockdown period and its effects on and around us. In keeping with our efforts to give freshers an insight into college life, we have featured a list of our most treasured JMC spots coupled with our nostalgic moments. The quintessence of JMC lies in its exuberant students, the splendid nature's caress and undoubtedly, in our extravagant fests. Waiting for all of it because when you're positive, good things happen! The fervent spirit of us, mathematicians-in-making, will give you an array of articles, ranging from rib-tickling pieces to informative writings, from mind-boggling puzzles to thought-provoking facts, from startling columns to illuminating strategies. This bag full of excitement will create an incredible platform for our college community to uncover their voices. We proudly present to you, the third edition of Algorithm that reflects the indomitable spirit of our erudite Editorial Board, Department of Mathematics, Jesus and Mary College and aspire for a pioneering, progressive and purposeful year ahead.

Happy Reading!

Gayatri Chabra





DAY 1 It's closed!!!! Time to live the dream, I'm so glad to be home. No more 8:30s. No more sleeping in metros and completing the sleep quota! No more annoying auto-rickshaw drivers. Delectable home-made food. The privilege of sitting in A/C all day. So good!

DAY 40 Okay, I could get used to this. I have time. I have the resources, maybe I should do something. I don't mind days full of Houseparty, Ludo, Psych, Skribbl and Netflix, though.

DAY 80 124 movies later. 6 shows later. 2 documentaries later. 4 Dalgona attempts later. I have a new best friend now, his name is Plaunty. He sits in a pile of mud on top of my bookshelf. We're very close.

120 I'll have my entire life for internships and courses, when else will I get to learn how to make momos? Fun facts- there are 729 boxes on my bedsheet, Chloe Ting has given up on me, and I miss the college canteen way too much.

160 We've lost so many stars. Even entertainment is going to hit a creative block much like the rest of us. Also, are exams even taking place?

DAY 200 I blow the dust off my alarm clock, my coffee is blacker than ever before. 8:30 is back to haunt me, the usual way, with a spell of incomplete sleep cycles. Some things never change.

CONTENT BY: DEEPJYOT AHLUWALIA ILLUSTRATION BY: RIMJHIM SINGH

# PLUGGED IN

Just like the morning cup of brew is irresistible to start the day, similarly, it is inevitable to not scroll through social media as soon as we move out of our beds. It plays an indispensable role in today's life and its relevance and impact make it a hotly debated topic. Social media is a webbased online platform to communicate, share ideas, create content, learn new skills and spread awareness regarding various issues.



Since the COVID-19 pandemic, human dependence on social media has beefed up. As people are confined within four walls, restricted from all kinds of physical human interactions, it has emerged as the new model of primary communication allowing us to experience a close connection with the outside world without even stepping out. It has also diverted our minds from the grave pandemic and has provided access to re-ignite our interests and hobbies which otherwise were not looked upon in our busy lives.

Since the lockdown, social media has come to the rescue of many. Various organizations and doctors have started using online platforms for therapies, thus providing the people in need, solace and tranquility. Social media has grown beyond personal use; companies also use it to broaden their consumer outreach, thereby increasing their brand value. In the educational field as well, dependence on social networking sites has increased along with the popularity of online learning.

In conclusion, social media can be considered as a new communication environment, which has drastically impacted our lives. But just like a coin has two sides, over-dependence on social media can be dangerous. Its excessive use can cause many problems in the human body. So, we can safely say that the role of social media as a medicine or a drug depends solely on how much we allow it to fuel our lives.

# WORLD ON THE WEB

# Existential Strikes Emergency

are the words to describe the year 2020- a year that did not exactly light a spark of joy.

The first thing that comes to our mind, when we think about 2020, is COVID-19, but it's not the only thing. When we think about 2020, we also think about the plethora of online media available to us. Our reliance on social media has seen a vast increase with businesses turning digital and classes becoming synonymous with Google Meet.

Every aspect of our life has been given a digital makeover, but is it possible to ensure sustainability?



The outbreak of the virus has led to tectonic shifts in the economy, businesses, job markets, and the way social interactions take place in general. The only way to protect ourselves from the virus is to avoid, rather totally cut down on physical contact.

Merchants who were dynamic enough to adapt to the ever-changing world around them, like Amazon, were able to rake in huge profits. But Jeff Bezos wasn't the only one solidifying his position as the richest billionaire. The outbreak of the virus has led to the global experimentation of doing almost everything online, from social interactions to gatherings, from teaching to learning, from health care to ed-tech.

This radical change has given way to online teaching by various institutes to proximate offline classroom learning. All schools and other educational institutes now rely upon online classes substituting offline ones to dispatch physical contact. Free from the bounds of a closed classroom, now students can take up as many courses as they desire and acquire any skill they want to.

But such a digital economy provides selective benefit to certain industries. leaving others to dig up their graves. This was evident in terms of a **negative growth rate**, **huge layoffs** of employees in many big companies. **ruining small business** households that operated mainly on working capital and rendering daily wagers and vendors with absolutely no means of income. Take the hospitality industry for example- it thrived on physical interaction and introverts fear of socializing. There have not been many alternatives for organizing digital weddings unless. you can perhaps convince Sundar Pichai to develop Google weddings.

ILLUSTRATION BY: SNEHA SUNNY

Weddings and social events have either been put to halt, or have undergone changes to accommodate only close friends and family. The catering industry, bridal, and jewellery sector have been struck by this disaster with many turning bankrupt. Unable to get clients, there have been numerous job cuts and lower salaries.

But it has also brought up the opportunity to connect with the world outside of our homes. Being confined in our home quarantines and switching to online media has also given us the chance of virtual social contact with all our loved ones from whom we may have been aloof over the years due to our fast-paced lives, busy schedules, and stringent deadlines. During the lockdown, people have strived to dust off their skills in their long-forgotten passions due to their busy lives by pursuing online courses in them.

Though one can assert that switching everything online has many drawbacks in terms of escalated screen times, low network coverage area, digital illiteracy, and detrimental health effects, but it has also brought about a surplus abundance of opportunities to expand not only our skill set but also our social connections. The pandemic has thus given us a chance to introspect and prepare ourselves technologically for the coming years.

# TOP 10 THINGS ABOUT JMC

6th March 2020; I walked happily out of college, beaming over the one-week mid-semester break. But who would've ever thought that it could turn out to be our last day of college?

Now, though everything has been shifted online, but the old me, who used to cry over 8:30 a.m. classes, travelling via metros and always finding out reasons to skip college, just wants to return to college once again.

Often, I find myself reminiscing about the days in college and praying for college to reopen.

# FEELIN' HOMESICK



ILLUSTRATION BY: SHRUTI KEDIA, GAYATRI CHABRA & SAGRIKA MALHAN

- ... I wish to stand in the line at the PHOTOCOPY SHOP to buy the readings and when I finally reach the shop, cry over not having change. I long to sit in the MINI-AMPHITHEATRE with my friends and spend those very crucial fifteen minutes of revision before the examination, as that's what gets you through the sail.
- I wish to run down to the CANTEEN as soon as the classes end, struggling among the people with hungry faces and salivating mouths to get my order. After all, the JMC canteen has a variety of food items available ranging from healthy fruit chaat to mouth-savouring bhelpuri to chole bhature and brownies.
- ... I wish to walk over to the L-PARK and savour the luscious green campus we are bestowed with. Sitting there, chit-chatting with my friends, trying to convince them to sneak into the sister's lounge.
- ... I wish to pass through the COMMON ROOM and groove to the songs along with Mudra. I want to spend some free time in CR and enjoy the free wi-fi which I was lucky enough to get access to.
- ... I wish to sit in the AMPHITHEATRE for my society meetings, run around the Amphi for fest arrangements and go through the various stalls put up.
- ... I wish to get into the THEVENET HALL in time to reserve a seat and going all dressed up to college to click pictures at the MPH stairs and the newly built office stairs in order to flex how beautiful our campus is.
- ... I wish to go all the way up to the fourth floor to attend classes but end up sitting in the TUTORIAL ROOMS hoping that the teacher doesn't find me.
- ... I wish to go to our magnificent LIBRARY, the only place where my college ID is used. Fully air-conditioned with pin-drop silence makes it the best area to complete our assignments and access the greatest resources for knowledge.
- ... I wish to go to the FIELD with my friends to sun-bathe on a winter morning, hold our gossip sessions and drink our morning coffee. I yearn for February to arrive and with it, Montage- the beautiful two days of grooving, singing and enjoying.

# 24 HOURS, IN A D

What is productivity? Well, in economic terms, productivity is commonly defined as the ratio between the volume of the output and the volume of the inputs. To put it in simple terms, it is the measure of the efficiency of a person in getting a task done. Being productive is about slowly completing the task with focus. It is more about working with a few things on your plate with mindfulness, rather than the common misconception of being a multitasking maniac. Productivity has definitely been affected by the lockdown. Initially, lockdown helped us to regain our energy and zeal, two things that we had lost thanks to our monotonous daily routines. But post the relaxation period, the work efficiency graph fell quite a bit. With all the offices and educational institutions being closed all around, and exams being either cancelled or postponed, we became more unoccupied. Eventually, we stopped keeping a count of the passing days, and gradually months, with no physical contact with the world outside.

Lockdown can be an energy-draining process but there is always a way to cheer yourself up with fun-filled activities!

**Get Cooking:** Cooking gives us scope to experiment with a variety of flavours at home safely. Moreover, cooking and utensil-washing have been scientifically proven as therapeutic for the human brain.

Yoga: Yoga is a great way to keep the mind and body healthy. Try practicing simple breathing exercises. like Pranayama. and postures, like Chakarasan, Surya Namaskar, etc.

Gardening: Attempt growing vegetables in the backyard, or engage in indoor gardening during the quarantine. This will not only make us feel stress-free, but will also add greenery to our surroundings!

**MOUR BBBDDNGS** ARE vadod differen rates and that's OKAY. ILLUSTRATION BY: SHRUTI KEDIA

COVID-19, a virus in technical and medical terms, but a pause button in our lives, entered our vigorous daily routines in March 2020. To curb the spread of this virus, the "lockdown" began with a short, aka, relaxing span of 21 days, that slowly got converted to a long period of 7 months. Our schedules transitioned from hectic and jam-packed, to easy-going and relaxed. In this period, we came across a lot of ways to keep ourselves busy and engaged with mindful activities, so that we wouldn't feel confined to the walls of our homes, and instead make it our happy place! Even after remaining so active, down the timeline, we often ponder, are we still as active as we used to be? Are we still the most organized of people? Do we still have the capacity to adjust and work in the office and college environment, or have we become more space-specific? It is imperative to observe that work-from-home and study-from-home have become common terms during this unprecedented time, and this trend is here to stay. Not only this, but we have also cut down on socializing with friends and relatives, distancing ourselves in our own small world.

These 7 long months gave us the most precious experience of a lifetime- time for ourselves. In this fast-paced world, our attention was always focused on work and dear ones, but never on our own selves. These 7 months helped us to have long pending discussions with our inner selves, to heal from the stress and pressure that our minds were entitled to. Unproductivity during this time should not be considered as guilt, but as comforting. Just being with ourselves helps us to be better versions of ourselves. Spending 24 hours in utmost silence and calmness is nothing but a relaxation for the soul!

CONTENT BY: RUCHI SINGH & SANGAVI

As a major virus outbreak in the 21st century, the Coronavirus disease 2019 (COVID-19) pandemic has led to unprecedented hazards to mental health globally. The COVID-19 virus is majorly impacting mental health by affecting our day to day functioning with changes like increasing unemployment and separating families. There is a worldwide fear, depression, and panic, because of this pandemic. The frequent updates of the worst-case scenarios by the media can fuel fear and worry.

Unknotting

A large proportion of the Indian population has diverse and vulnerable life situations, such as elderly and poor with chronic or acute ailments, migrant labourers and people stranded in locations other than their own homes, senior citizens and individuals quarantined in their homes or public facilities, and families of those who have been quarantined. Such a large number of individuals are vulnerable and may show signs and symptoms of mental distress and emotional problems.

Health emergencies, such as epidemics, can lead to detrimental and long-lasting psychosocial consequences due to disease-related fear and anxiety, large-scale social isolation, and the overabundance of (mis)information on social media and elsewhere. There have been reports of a sudden surge in domestic violence and child abuse incidences in midst of the COVID-19 crisis. At the individual level, epidemics are associated with a wide range of psychiatric comorbidities including anxiety, panic, depression and trauma-related disorders. While quarantine is a necessary preventive measure to curb the spread of this infectious disease, many studies have reported a negative psychological impact of quarantine on individuals. The psychosocial impact of health emergencies seems to be even higher during quarantine.



Quarantine has been associated with high stress levels, depression, irritability insomnia ,etc.

Furthermore, being quarantined has directly and/or indirectly led to acute stress and trauma-related disorders, particularly in specific at-risk populations, such as health workers.

Relatively high rates of symptoms of

ANXIETY (6.33% to 50.9%) psychological distress (34.43% to 38%)

PTSD (7% to 53.8%)

depression (14.6% to 48.3%)

**Stress** (8.1% to 81.9%)

have been reported in the general population during the pandemic.

As part of its public health response, WHO has worked with partners to develop a set of new materials on the mental health and psychosocial support aspects of COVID-19. During this difficult time, it's important to continue looking after your physical and mental health. This will not only help you in the long-term, but will also help you fight COVID-19 if you get infected with it.

With the COVID turmoil in the backdrop of an already-competitive atmosphere, the student community is amongst the unfairly placed in the entire discourse. Adding to the pressure of our instrumental years, we are now faced with internal challenges and resistance. With uncertainty, looming large for an indefinite time now, experts believe we must evolve self- care routines of our own.

While these routines cannot essentially help us deal with the stress of a technology-laced life, all on its own, it has its proven mitigating merits. The ongoing pandemic has forced us all to adopt a shell-lifestyle, thereby taking away our primary means of relief in ordinary times - social interaction. Thus, we must evolve techniques that provide some semblance of a buffer in our normal routines. This could either be built through a focused time, rid of technology, wherein we could invest in constructive activities like journaling, painting, or singing instead. It is also advisable if the allocated time is fixed, in our schedules, as it will also prove to be an element we could gravitate about, thereby lending stability to a largely unpredictable lifestyle. In the same breath, it is essential to recognise that each self-care strategy should be tailored to fit the resources and agency over the time of each individual. One must strive to normalise the exercise into daily routines so that, the impact of its adoption can zero down to our usual selves and enable us to cope with the stress of everyday lives better. Despite the physical barriers, maintaining a healthily demarcated equation, with our external support system is a major coping strategy. Above all, as students, we must remember to not overburden ourselves with academic (or other) goals. After all, we are living in a pandemic, not with the pandemic.

# BUSINESS REVIEWS

The pandemic came as a challenge for all of us and as it is rightly said, it's all a part of the process. Therefore, it depends on us how we define our ways. Here are stories of two successful entrepreneurs that inspire us to strive hard each day to the best of our capabilities and not be scared of the

challenges that life has to offer.



Many of us have seen senior members in our homes trying to cope up with the latest trends in technology- whether it's downloading apps, ordering from their phones, or doing transactions online. This is where Tanvi Arvind, a 14-year-old student of Sishya School in Chennai, decided to step in with TechEdEn in 2019, a services startup that aims to Educate and Enable Technology for the "techchallenged".

With TechEdEn, Tanvi teaches senior citizens the basic uses of technology, like booking a ride service with Uber or Ola, using Swiggy to order food, learning how to navigate Zoom and Facetime, to be able to connect with their loved ones, online travel booking, using Google Maps and installing and using social media platforms, etc.

With help from her sister and an associate who volunteered her time, Tanvi has clocked a top line of Rs 28,400 in the first year itself. She plans to introduce telephonic support in the second year and online support by the third year, by hiring enthusiastic and tech-savvy school students, which is yet to take off, and yet to spread its wings.

During these times, learning technology is not just an important tool to navigate through our daily routines, but also an absolute necessity as we face a future of social distancing and being confined to our homes for longer periods of time.

**Website:** <a href="https://sites.google.com/view/techeden/home">https://sites.google.com/view/techeden/home</a> **Instagram:** <a href="https://instagram.com/techeden.learn?igshid=r33ggn91nk8p">https://instagram.com/techeden.learn?igshid=r33ggn91nk8p</a>

"The secret of change is to focus all of your energy, not on fighting the old."

but on building the new." -Dan Millman



In March 2020, entrepreneur Vanshika Choudhary shifted base from Delhi to Mumbai to manage her two apparel startups. Founded in August 2017, B2C e-commerce platform, KNYA caters to working women, while KNYA Uniforms sells uniforms to restaurants, hotels, schools, and a few hospitals. With the onset of the pandemic, came the uncertainty of where the businesses were headed.

The surge of COVID-19 scare was only beginning in India and the entrepreneur learnt that manufacturing PPE kits were possible with the existing infrastructure. With her husband, the duo launched KNYA MED and started supplying PPE kits to a few hospitals in Mumbai, mostly existing clients of KNYA Uniforms.

In the last eight months, their latest venture of B2B medical apparel has supplied almost 6 lakh PPE kits to over 250 hospitals. The products are priced between Rs. 300 and Rs. 700, and 25 percent of KNYA MED's revenues are donated to meet the needs of cities/towns that have high cases of COVID-19.

**Instagram:** <a href="https://instagram.com/knyamed?igshid=1txwdekok23se">https://instagram.com/knyamed?igshid=1txwdekok23se</a>

# MATHEMATICS AND ITS PRACTICAL APPLICATIONS



CONTENT BY: ADDITI PANDEY & ISHIKA BANSAL

## Introduction

Very often we question ourselves and ask if we will ever come across any practical application of this university mathematics. Well, we have compiled a few applications for you, while we discuss some in a wider range.

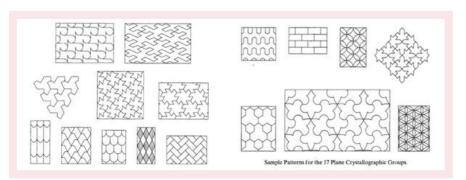
Every physical problem that you can think of, is solvable. We use several models to predict the results. This is where we use ODEs and PDEs. In the first year, you studied about Vectors. Fluid Dynamics and Electromagnetism use these mathematical tools. Image Processing requires storing pixel details in a matrix. This is where we need Multivariate Calculus and Algebra, Analysis and Geometry. To decode a message, we use Logic and Linear Algebra, while to find directions and solve many real-life problems based on electricity and, roads and highways, we use Graph Theory. Optimisation problems are of general interest to management students. These problems can be extremely challenging if Algebra doesn't come to the rescue, as a lot of variables are used.

# APPLICATIONS OF GROUP THEORY

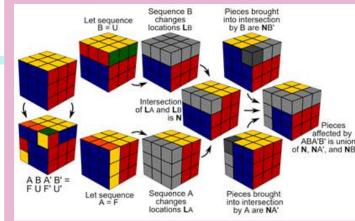
Broadly speaking, group theory is the study of symmetry. If you have any symmetric object, Group Theory can help with the analysis. We say anything is symmetric if it does not change under any transformation. For instance, we expect the laws of physics to be unchanging. Modern physics would not have existed without the presence of these laws and their amalgamation with Group Theory. The structure and the behaviour of the molecules and crystals are all the results of application of Group Theory. In fact, Group Theory predicted the existence of several elements before the chemists could. Within mathematics, it is applicable almost everywhere, from Geometry to Analysis. Some easy to visualize applications of Group Theory are in Rubik's cube, wallpapers and equations.

We will now talk about two of these fun applications of Group Theory:

Wallpapers usually have a repetitive pattern. Groups of such wallpapers form isometries that act on two-dimensional repeating pattern. We may think that there will be infinitely many wallpapers of repetitive patterns but, Russian Mathematician proved that only 17 such patterns are possible.



Sample patters for 17 Plane Crystallographic Groups



Rubik's Cube

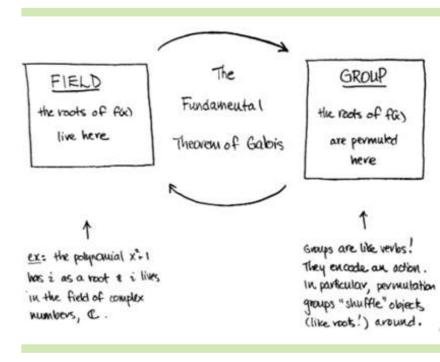
Now, we all have studied the quadratic formula in middle school. We have also heard about the existence of cubic and quintic formula to provide solutions. However, it is neither possible to go beyond this nor to find solutions of quintic equations. It turns out that degree 5 polynomials related to A5 are not solvable and a polynomial is solvable if and only if its symmetric group is solvable.

Galois came up with this in 19th century and thus formulated the famous Galois Theory! Galois Theory uncovers a relationship between the structure of groups and the structure of fields. It then uses this relationship to describe how the roots of a polynomial relate to one another.

More specifically, we start with a polynomial f(x). Its roots lie in a field (called the splitting field of f(x)). These roots display a symmetry which is seen by letting a certain group (called the Galois group of f(x)) act on them. And we can gather information about the group's structure from the field's structure and vice versa via the Fundamental Theorem of Galois.

Now, why would anyone care about permuting the roots of a polynomial? What good does that do? Well, the quadratic formula was well-known by the time Galois came along. (It dates back to the Babylonians). So naturally, mathematicians wondered, "Does an analogous formula exist for polynomials of higher degree?" In other words, can the roots of an nth degree polynomial be written down as some algebraic combination (+,-,×,÷,√) polvnomial's of the coefficients? It turns out the answer is "Yes!" when n≤4, but "No," for any n≥5.

It was precisely Galois's study of permutation groups of the roots of polynomials that led to his discovery of a necessary and sufficient condition for finding such a formula. The condition (which eluded mathematicians for over 300 years!) becomes elegantly clear when the problem is translated from the language of field theory to that of group theory. Galois' theory is the dictionary, which makes this possible.

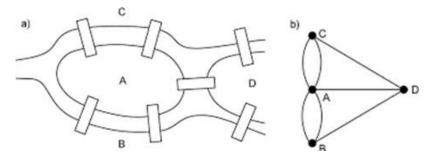


## APPLICATIONS OF GRAPH THEORY

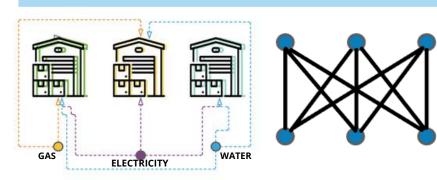
Graph Theory is a relatively newer field of mathematics that comes under Discrete Mathematics. Inspired by the Konigsberg Bridge problem in the 18th century when Euler was asked to find the path crossing each of seven bridges connecting four rivers exactly once, developing from a very basic pathfinding problem (not so easy at that time), Graph Theory has its application in almost all the fields of science today. Not just that, a lot of real-life problems based on highways and roads use Graph Theory for solutions.

The ubiquitous Google maps also use Graph Theory to find different paths between two points- starting point and final destination. In Graph Theory, these points are referred to as vertices, and the possible routes joining them as, edges. Depending on whether a route is unidirectional, that is, one way, or a general bidirectional route, the concept of directed and undirected graphs is used. A lot of utility problems, like connecting three houses with electricity and water supply, such that none of them cross each other, can simply be solved using the concepts of Graph Theory.

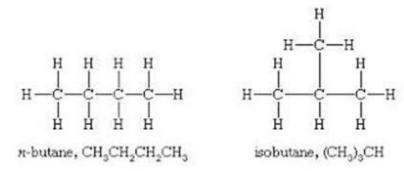
We now discuss the usage of graph theory in science and other computer-based algorithms. The structure of molecules is represented using graph theory. In the case of isomers (molecules with the same chemical formula), it is only possible to differentiate the two structures based upon their representation which is given by Graph Theory. Many computer-based algorithms are designed using Graph Theory, like finding the shortest path or finding the cycle, and many others.



Konigsberg bridge problem and its representation using graph theory



Graphical representation of utility problems



Isomers can only be differentiated on the basis of their structures which is given by graph theory

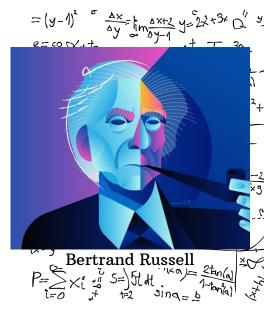
Doesn't this make you all a little more inquisitive about what you are studying? How the topics you are studying are being used in so many things. The concepts which you probably never related to the real world could turn out to have this much of significance! Well, university maths is not as boring as people claim it to be.

# yet another PARA OX

"We do better while the earth does worse."

Absurd, quizzical and somewhat true, these are the words you would use for the above statement, right? That's what entails a paradox; a seemingly absurd but true proposition backed by logical reasoning.

The Russell paradox is one such example that is bound to leave you scratching your head! Bertrand Russell encountered a limitation of set theory in 1903, in his book, 'Principals of Mathematics'. Ambitious and driven to prove that all mathematical concepts could be derived from basic principles of set theory, he opened a Pandora's box. In mathematical expression, it states that a set  $R=\{S\mid S \oplus S\}$ , i.e., the set of all sets that isn't a member of itself. Does R contain itself? Suppose R does contain itself ( $R \in R$ ), then  $R \in \{S\mid S \oplus S\}$  and we arrive at a contradiction. If we assume that  $R \notin R$ , then R contains itself as it satisfies the property, hence  $R \in \{S\mid S \oplus S\}$ . Still confused? Try understanding it through the barber version.



Suppose in the hypothetical town of Arabia there is only one barber, Sam, who shaves ALL men who don't shave themselves. Now the paradox arises with the question- Does the barber shave himself?



If Sam shaves himself, then he as the barber, shaves men who shave themselves, which is a contradiction to the above mentioned rule. If he doesn't shave himself, then there is another barber who shaves him, and this is not allowed in Arabia's constitution, since he is the only one to shave men who don't use the razor themselves. Well if you are close to a nervous breakdown, you are not alone.

This riddle sent Gorgon Frege to the hospital who spent 20 years trying to find the missing piece of the puzzle.

Leading mathematicians fretted over this discovery for the fear of it ruining the foundation of mathematics. To save the pillars of mathematics from crumbling, they devised a solution by defining set in an altogether different manner, giving rise to the modern day definition of sets, i.e., a set  $R = \{x \in A \mid x \text{ satisfies a Property P}\}$ . Here A is another set. If only Gorgon Frege was lucky enough to unearth the solution.

# THE CHARISMA OF FERMAT'S LAST THEOREM

CONTENT BY: SHRUTI KEDIA

In the 1960s, Andrew Wiles read about Fermat's Last Theorem. "Here was a problem, that I, a ten-year-old, could understand and I knew from that moment that I would never let it go. I had to solve it." But this story isn't about him; it's about the charisma of the theorem that left the mathematical community bewildered for centuries.

Pierre de Fermat, who was born in 1601, left a spectacular math equation with a rather tantalizing note in the margins of a book, "...I have discovered a truly remarkable proof [of this theorem], but this margin is too small to contain it." Fermat was known to tease with such notes after all the theorems he wrote. The most famous one being, "I can provide this, but I have to feed the cat". Over the years, all other theorems were proven. This one theorem, however, was left unsolved for over almost 400 years.

Fermat's Last theorem is very simple to understand. We all know that it is possible to write a lot of squared numbers as equal to the sum of two squared components. For instance,  $4^2 + 3^2 = 5^2$ . While trying to find such triplets for powers more than 2, Fermat concluded that:  $x^n + y^n = z^n$  has no whole number solution when n>2.

The beauty of the problem struck Andrew Wiles in his childhood and he fell in love with it. After several failed attempts, in 1986, Wiles read about the recent work, at that time, by Ken Ribet which established that the Taniyama-Shimura conjecture was somehow linked to Fermat's Last Theorem. "I was electrified. I knew that moment the course of my life was changing".

He went on to prove the conjecture, and hence the theorem. He worked on the problem in secret for seven years— then he thought, he'd found a reliable proof, which he announced to the math world in 1994. "It was so indescribably beautiful; it was so simple and elegant."

However, after countless praises and achieving unimaginable fame in the math community, an error was found in his proof. It wasn't after, a year later, with the help of Richard Taylor (another mathematician) that the error was rectified. So it came to be that after 358 years and 7 years of one man's undivided attention that Fermat's last theorem was finally solved. Wiles was awarded the Abel Prize in 2016 for his work.



SOURCE: GOOGLE IMAGES

The majority of the mathematicians believe that the techniques used in the proof weren't around in the 17th century, and Fermat might have been wrong. Did Fermat have a wrong proof? Or did he simply lie about it? Or does a marvelous proof exist out there that the mathematicians haven't thought of yet? We'll probably never know. What do you think?

# how BITCOIN works

World Wide Decentralized peer to peer network



Miners create Bitcoins by using computers to solve mathematical functions. The same process verifies transactions.



Bitcoin exchanges trade conventional currencies for Bitcoin, offering a way in and out of the market for non-miners.



Individuals and businesses create wallets that allow them to send and receive Bitcoin.



Cryptography secures the network, ensuring that all balances and transactions are safe.

Before understanding how Bitcoin works, it's necessary to know what Bitcoin is. Don't be fooled by stock images of shiny coins emblazoned with modified Thai monetary unit symbols. Bitcoin is a purely digital phenomenon, a set of protocols and processes.

Bitcoin emerged in 2008 just after Occupy Wall Street accused big banks of misusing borrowers' money, duping clients, rigging the system, and charging boggling fees. Bitcoin pioneers wanted to put the seller in charge, eliminate the middleman, cancel interest fees, and make transactions transparent.

Without getting into the technical details, Bitcoin works on a massive public ledger, also called a blockchain, where all confirmed transactions are included as so-called 'blocks'. As each block enters the system, it is broadcast to the peer-to-peer computer network of users for validation. There is no central monetary authority as in the case of traditional currencies. In this way, all users are aware of each transaction.

Bitcoins are mathematically generated as the computers in this network execute gruelling number-crunching tasks. This procedure is known as Bitcoin "mining". ECDSA is short for Elliptic Curve Digital Signature Algorithm. It's a process that uses an elliptic curve and a finite field to "sign" data in such a way that third parties can verify the authenticity of the signature while the signer retains the exclusive ability to create the signature. The mathematics of the Bitcoin system was set up so that it becomes progressively more difficult to "mine".

There's so much more to Bitcoin! So here we present some interesting facts on Bitcoin!

Miners create Bitcoins by using computers to solve mathematical functions.

Bitcoin exchangers trade conventional currencies for Bitcoin, which provides the consumers with a way to use Bitcoin in day-to-day transactions.

Bitcoin's supply is finite: 21 million to be exact.

There are specific wallets for Bitcoin transactions.

The first Bitcoin purchase was for Pizza.

The inventor of Bitcoin is a mystery.

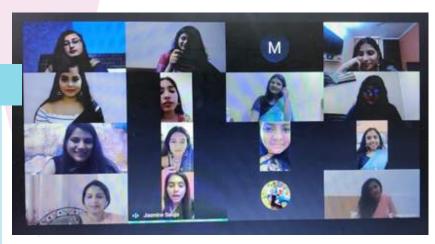
If you lose your Bitcoin private key.
you lose your bitcoins.

Cryptography secures the network. ensuring that all balances and transactions are safe.

# The Department of Mathematics

# **FAREWELL**

heavy heart, Mathematics Department of bid goodbye to the graduating batch of 2020. This year, the graduating batch may not have had flowers and graduation caps, but what they did have was possibly the most special farewell ceremony in history. online farewell organized on June 13, along with a special Instagram page portraying the batch Bollywood characters.



A unique video was made wherein the teachers and juniors expressed their well wishes for the future. The highlights were the cultural performances, games such as Bollywood Gibberish and Never Have I Ever, which added fun and life to the virtual party.

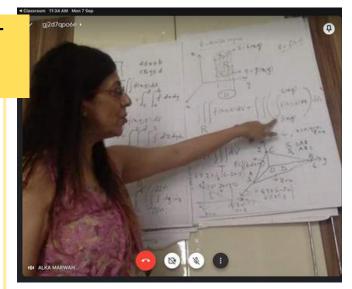


## WEBINAR

The Department of Mathematics in collaboration with IQAC, Jesus and Mary College, organized an interactive webinar on the topic "How to stay Cyber safe in Covid-19 times" on 22nd June. The guest speaker was Anup Kanti Deb, Director, Palo Alto Networks. It was very interactive as well as relatable. It cautioned about the increasing cyber-crimes and informed about how to stay protected from them.

# COMMENCEMENT OF ONLINE CLASSES

Students across the world lost valuable time in their education during the imposed lockdown amidst fears of pandemic. The situation had forced the colleges to shut down and the students to stay at home. The extended lockdown period forced the education sector to rapidly evolve and all institutions came up with the idea of online classes. Keeping with the vision of starting the academic years instead of wasting time due to delay of reopening of colleges, online classes commenced from August 10 at JMC. This transition has been tough but all of us are in this together and will surely come out stronger.

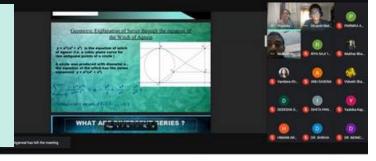






Even the lockdown couldn't stop the students from expressing love and gratitude towards their wonderful and devoted teachers. The Department of Mathematics organized a virtual Teachers' Day to celebrate the efforts and dedication of our teachers, especially during this pandemic. Dance and song performances kept the event fun and engaging. Students also prepared a video showcasing the journey of every teacher in the department which touched their hearts.

# INTER-COLLEGE PAPER PRESENTATION COMPETITION



The Department of Mathematics successfully hosted its first event for this semester on November 4, 2020. The topic of the Competition was "Applications of Mathematics Across Diverse Fields". The event received a great response and was graced by Dr. Sandra Joseph, Principal, Jesus and Mary College along with the Judges of the competition, Dr. Vandana Khaitan and Dr. Anu Saxena. We were extremely delighted to have our alumni Neha Sam, Vidhi Vashishth and Yukti, who took out time to guide us by sharing their experience of writing a research paper.

## **ELECTIONS**

The Department of Mathematics elected its new President and Vice President for the session 2020-21 by conducting elections on 11th September. Each student voted for the person of their choice via an online form. The results were announced later on the same day.

## STUDENT COUNCIL

Ms. Yashika Kapoor (PRESIDENT)

Ms. Aditi Mehra (VICE PRESIDENT)

## **FACULTY**

Teacher in Charge: Dr. Indrakshi Dutta | Association In Charge: Dr. Shruti Tohan

Dr. Alka Marwaha Dr. A Ms. Sunita Narain Dr. A

Dr. Anu Ahuja Dr. Anu Saxena Ms. Rama Saxena Dr. Rashmi Thukral Ms. Richa Krishna Dr. Monica Rani

Dr. Ambika Bhambani Dr. Shikha Singh

**ACHIEVEMENTS** 

Anushka Chhabra: First position in Big Data Analytics Quiz- IMS Ghaziabad and BRICS.

**DeepJyot Ahluwalia**: First position in Girl-up Sakhi creative writing competition creative writing competition by Girl-up Delhi: Second position in Biz-ipher by Ecell JMC: Nocturnal Trailblazers by Peace society: Microtale Competition by Peace Society.

Priyanshi Arora: Got her poems published in Ramona Magazine US and Potted Purple Zine.

Rimjhim Singh: Winner at MIT Covid-19 'Turning the Tide-India' Hackathon.

Ruchi Singh: First position in Essay Competition- NSS JMC.

Sanchita Balani : First position in Chess Puzzles Competition- Puzzle Society JMC.

Sangavi: Semi-finalist and 5th best novice speaker in Indian Women's Debating Championship.

Sunaina Chhabra: First position in Beat The Heat- Quarantine Bhangra Competition: CT College Jalandhar:

Second position in E-Cosmopolitan- Online Dance Competition (Solo Category) Hindu College.

Tweshaa Dewan: First position in 'Pursuance' Case Study Competition SRCC.

# पिंजरा

पिंजरा तोड उड जा नील गगन में ओ री चिरैया बंदिशें रोके तुझे क्यूं जब हौसला लिया है तूने बंदिशों को मार बंदूके नील गगन में उड़ जा चिरैया।। हुकूमतों कि आंधियों में जिया है तूने हर पलों को अब रोकना न टोकना है बंदिशों को मार बंदूके नील गगन में उड़ जा चिरैया।। गर दाना देने तुझे बुलाएं ना मोड़ना तू दाना देख यूं तुझे दौड़ना है आगे यूं कि दाना चुग तू खुद है लाए तो बंदिशों को मार बंदूके नील गगन में उड़ जा चिरैया।। यह ज़मीं जितनी गहरी है आसमां उतना है गहरा ज़मीं पर तेरे पंख नहीं है हौसलों की उड़ान में आसमां तुझसे छूटेगा क्यूं बंदिशों को मार बंदूके नील गगन में उड जा चिरैया 🕕



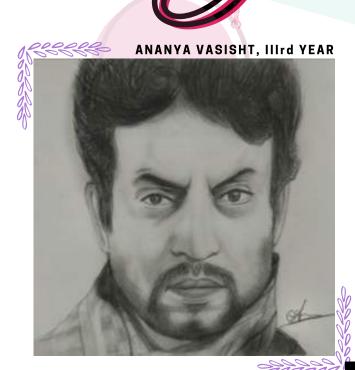


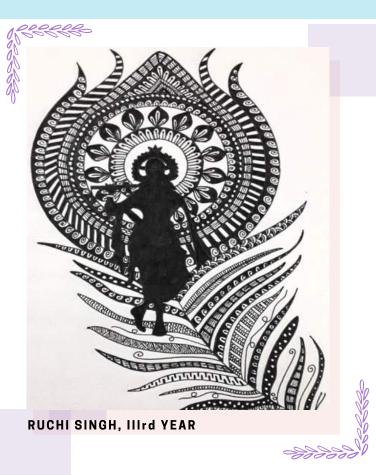
ANANYA VASISHT, IIIrd YEAR

Musi



PALKIN, IInd YEAR





#### SNEHA SUNNY, IIIrd YEAR



# THE CORNERS OF THE ROOM

The eight corners in my room A corner, where the three axis' meet Four on the ground, four on the ceiling More like the crossroads of life.

It's dark there, it's empty there, A place where no one resides The middle of the solitude Coloured black and white.

It says where have you been? Trapped in my misguided teen. You grew up so quickly The innocence faded.

Seeing beneath the shadows In the unpleasant dusk Seeking my desire To forbidden love.

Everything around me Was causing pain All of the remedies Were going in vain.

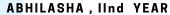
I buried my thoughts I wore my grief I traded my happiness For the abysmal pain

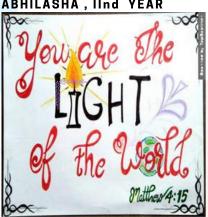
I hid my fears About which no one cared Begged for my life And it got harder to breathe.

Corners drew in Lit a flame in me The world watched me burn And ignored the ashes fall.

-SUNAINA CHHABRA, IInd YEAR









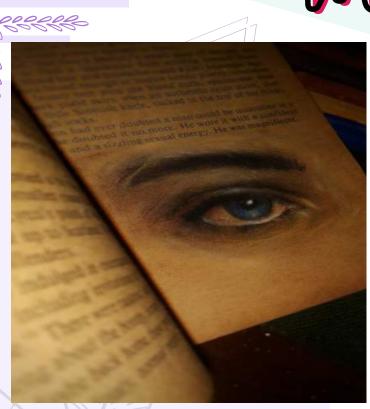
# LIFE-AN EXAM

Life is an exam, give it Don't run from it and leave it. You may fail to pass But don't break your heart like glass. Everything happening in life is an accident And you are a human that's the biggest incident. Try to be the best You may be the last but not the least. The most expensive thing is life Enjoy each day and fly freely like a kite. Every attempt is a new try But failure does not mean a cry. Failure is compulsory in life But don't become sad and doubt the worth of life. You may face sadness But the other day your door will be knocked by happiness. There are thorns in the way It is difficult don't say. One-day success will be your wife This is the simple trick to live a life.

-SIMRAN ARORA, IInd YEAR



PALKIN, IInd YEAR



ANANYA VASISHT, IIIrd YEAR



RIYA SAJI, IInd YEAR













VANSHIKA SEHGAL, IInd YEAR

-000000



LOCKDOWN EDITION

SNEHA SUNNY, IIIrd YEAR





RIYA SAJI, IInd YEAR



ANJALI MISHRA, IIIrd YEAR



PALKIN, IInd YEAR

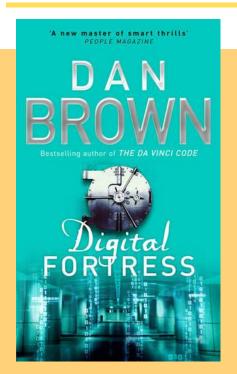




# ALGORITHM RECOMMENDS!

CONTENT BY: ANVITA PUSHKARNA & DEEPJYOT AHLUWALIA

# BOOKS

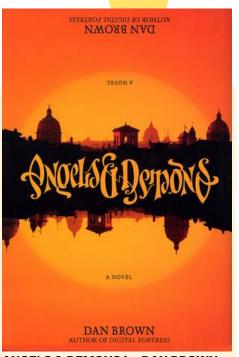


#### **DIGITAL FORTRESS by DAN BROWN**

Digital Fortress offers a beautifully balanced blend of technical and imaginative aspects, in contrast with stories that go on and on and on about their protagonists or their storylines. Set all around the world, the wild goose chase in search of answers and algorithms, paired with the mystery and amusement of cryptography gives this book the coveted reputation it has. A mustread for anyone interested in supercomputers, cryptography, and a good story!

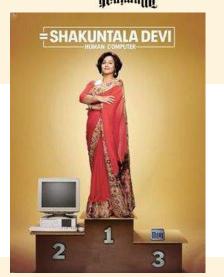
#### **SHAKUNTALA DEVI**

Who understands Shakuntala Devi better than budding women mathematicians? This fearless, confident woman, who reached for the stars, and adopted them, shows the world the power of a female mathematician.



### **ANGELS & DEMONS by DAN BROWN**

Unlike other fast paced, page turning mystery novels where the big revelation is at the end, this suspenseful thriller has its big reveals spread throughout and will surely make you forget about taking a sip of the hot coffee you sat down to begin with. Dan Brown has struck a perfect balance with this story, as a futuristic reality from science intertwines with irrefutable facts from history and all of this is timed to perfection by a relentless non-stop timer, with a very



# You don't stop playing when you grow old when you stop playing.

TAG This real-life based story was first broken by an article on the front page of The Wall Street Journal in 2013. The plot is built on the lives of a group of men, who've been playing the game of TAG for 23 years. Watch this movie as it appeals to the inner child inside you who just wants to trade all the tensions, pressures, deadlines and goals of today with a moment of going back to play with your childhood friends. The movie is fun, but the game is serious as Hawk Eye from Avengers cautiously plans and eludes to avoid being IT and breaks both his arms (seriously!) costing him his fight with Thanos. He just cannot be IT, no way at all.





Michael is a British stand-up comedian who never disappoints and will make you roll on your belly with his witty and humorous life stories. Definitely a must watch as you are bound to relate to him if you are from the planet earth. His accents, observations and way of relating real-life stuff that we all do is a real gem. He is beyond the principle of "punching-up" as his humor is not based on a specific person or group, but rather on stuff that we all do in our daily lives. In his own words, he is a fat Asian born in the UK.



# SHOWS

## **BROOKLYN NINE-NINE**

Finally, a comedic masterpiece that does not need the fake cheap laughter track in the background to tell its viewers that a joke has been cracked. Watch a police team based in a Brooklyn precinct (see the name, duh!) be the living embodiment of

No doubt .No doubt. No doubt. Fremulon - Not a Doctor. Sshhhh!



INSTAGRAM-PAGES

## THE MENTALIST



#### THE MENTALIST

Through a series built on revenge and mystery, a "psychic" convinces the CBI to entertain his quest to avenge his family's murder. Each episode is a delight, and the plot twists truly do turn you around! The best part; "Where's Jane?"

# ANIME

#### **DEATH NOTE**

One of the oldest and most famous animes ever, Death Note brings out an intricate connection between an imaginary world, a high school kid, a notebook, absurd plots and deaths, and...an imaginary world? Oh, and did we say, an imaginary world?





college students have 3 moods:

- 1. 77777777777777
- 2. ????????????????
- 3. !!!!!!!!!!!!!!!!!!!!!!!!!!

#### STUDENT PROBLEMS

A collection of SUPER relatable memes. From lectures to hostel life, to movies and everything about a college-oops-uni-life!

# GAMES SECTION

CONTENT AND COMPILATION BY: SUHANA DHINGRA & VANSHIKA ARORA



#### QI. Your reaction to the lockdown announcement:

- a. You slept on it.
- b. You already started feeling the FOMO on your happening college life.
- c. You just got excited to try out a lot of different activities which you otherwise could have not done.
- d. You were secretly content about it because this was the ideal situation for you.
- e. You already got a bunch of TV shows in your watchlist which you've been planning to watch since a long time.
- f. You got really freaked out on hearing that you won't be able to go to the gym.

#### Q3. Your favourite part of any day in lockdown:

- a. When you finally lay in bed for your nap time, which you literally do most of the time.
- b. When you socialize with your friends.
- c. When you practice your current hobby.
- d. When you curl up with your favourite book.
- e. When you binge watch your favourite TV series.
- f. When you check yourself out in the mirror and try different outfits after a long and sweaty workout.

#### Q5. The first place where you plan to go as soon as things get better:

- a. You'll go to a spa to get a nice massage.
- b. A night out with your friends where you'll click a lot of pictures which you're planning to post ever since the lockdown began.
- c. You're just waiting for the college to reopen.
- d. You're too happy with where you are and just don't wish to go anywhere.
- e. Movie theatres!
- f. Your gym, obviously!

#### Q2. Your friends' birthdays in lockdown:

- a. You wish her late and then you keep procrastinating the surprises.
- b. You are the main party planner, in fact, more than the birthday girl, your friends want you in the party.
- c. You try to steal the thunder by flaunting about your latest hobby.
- d. You mute yourself and minimize your participation in the virtual birthday celebration and let others enjoy without you.
- e. You always plan a binge-watching night for each of your friends' birthdays.
- f. You set up new workout challenges with your friends.

#### Q4. Your first day of the online classes of this semester:

- a. You were late for the first online class too and probably took it half-asleep!
- b. You were too excited to meet your friends, be it virtually.
- c. You were the most enthusiastic person in the discussions about various lockdown activities.
- d. The only thing that you wished was that you are not asked to turn on your video.
- e. You couldn't stop toggling between Netflix and google meet.
- f. You were eagerly waiting for the break so that you could do your morning workout.

RESULTS

If you got mostly A's, then you're a professional procrastinator. You were the laziest version of yourself during the lockdown. You could spend days in your bed without getting up. Lockdown was no less than a real long vacation for you.

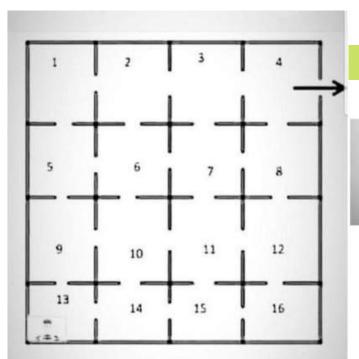
If you got mostly B's, then you're an outgoing person. You just love hanging out with your friends and won't leave any opportunity to go out with them. You couldn't curse lockdown enough and are eagerly waiting for things to get better.

If you got mostly Cs, then you're a hobbyist. You love to explore and try out new things and lockdown was the perfect opportunity to do so. You have learnt a lot during this time and your family and friends got to see your recently explored hidden talents.

If you got mostly D's, then you're an introvert. You love the quiet time you have to yourself and the lockdown was the perfect excuse for you to justify your asocial personality, initially, you must have been happy but later you realized that you need to prepare yourself for life after the lockdown as well.

If you got mostly Es, then you're a binge-lover. Lockdown was such a perfect time for you to watch your wishlisted movies and TV shows and to explore new genres of the same. You must have probably become the go-to person for such recommendations.

If you got mostly Fs. then you're a gym-junkie. Even though the gyms had been closed during lockdown, you left no stone unturned to maintain your fitness streak. Your YouTube history must be filled with different workout challenges.





A hospital has 16 isolation rooms. Each room has a patient with a different illness. Patient in room 13 recovers and wants to say goodbye to each patient. He can only visit each patient once. If he visits a patient twice, he becomes ill again. How does he do this and exit from room 4?

# LOCKDOWN WORD SEARCH

There are IO words hidden in the word search below. The words may be found across, down, diagonally and backwards and can overlap with each other. The hidden words are listed along with the word search.

Words:
ANTIBODY
GSUITEID
POSITIVE
VIRTUAL
ANTIRACISM
LOCUST
SYMPTOMS
EARTHQUAKES
POLLUTION

**VACCINE** 

M D E A R T H Q U A K E S
L L T Y R A I E S A L N G
F A N D E E I I T C L I N
A U C O L E E N I C C A V
O T I B Q T A N T H G E D
T R D I E T I U S G X H E
O I E T L O C U S T I B H
E V G N M P I M A R W C U
S H F A N T I R A C I S M
I S O M P O L L U T I O N
A T N E S Y M P T O M S I
G K B M P O S I T I V E O
O A S O O S F V S T A C Y



Untangle those earphones!

It's time to unwind and de-stress to some divine rhythms and soulful tunes.

We bring to you.

a playlist curated with love.
by our in-house A.R Rahmans.

<u>Surprise!</u>

Scan the QR code or click here!



# The Editorial Board



PRINCIPAL DESIGNER

Gayafri Chabra

Rinjhim Singh





Himani Hrora

Shrufi Kedia





SOCIAL MEDIA HEAD

zwruchi Beck

# DESIGN AND PRESENTATION

Isha Shah Deo Palkin Suhana Dhingra Vanshika Sehgal

## **ILLUSTRATIONS**

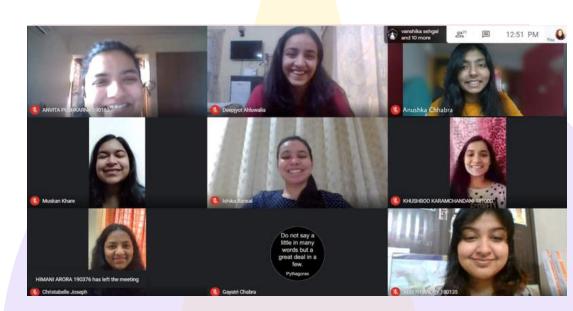
Sagrika Malhan Sneha Sunny Suhana Dhingra

# CONTENT AND COMPILATION

Additi Pandey
Anushka Chhabra
Anvita Pushkarna
Christabelle R. Joseph
Deepjyot Ahluwalia
Isha Shah Deo
Ishika Bansal
Khushboo Karamchandani
Muskan Khare
Purty Kapoor
Ruchi Singh
Sagrika Malhan
Sangavi
Suhana Dhingra
Vanshika Arora

# SOCIAL MEDIA MANAGEMENT

Abhilasha Francis Anushka Chhabra Muskan Khare Purty Kapoor Vanshika Arora



# Meet the Team

