



Bonfire

By JIPMER Students

Thursday, September 23, 2021

Volume 2 Issue 6



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An illustration showing a grey silhouette of a man and a girl in a black dress holding hands. A stream of colorful butterflies flows from the man's head towards the girl.

Ghosts Stories In My Head

"Hey Dad!

I dreamt about you last night."

A letter from Nidhi Nagaraju, to a lost soul who's never forgotten...

Turn to Page 3 for more!

Illustrated by
Pooja P S, 2k20

- **Constitution of IT Working committee** - A working IT committee has been constituted for JIPMER Karaikal, the committee is formed under The Dean, Karaikal, with other venerable professors and doctors.
- **Independence Day** - The 75th independence year was celebrated with cultural activities opposite to the administration block on 15th of August. It was telecasted live via a Zoom meet.
- **HIC workshop from 28th of September to October 2** - The 5th Hospital infection control workshop will be conducted with the target audience of the faculty, consultants and residents of microbiology.



- **Call for proposals for IEC**- Online application for submission of proposals to the Institutional Ethics Committee for observational and Interventional studies for September 2021 has been called for. For further details see <https://jipmer.edu.in/research/research-committees/institute-ethics-committee/important-information>.



- **Table tennis interclass has been postponed** - owing to unavailability of participants, the table tennis interclass tournament has been postponed. The new date is yet to be finalized.

BOOK REVIEW - CATHARSIS (TRANS MEN IN INDIA#1)



This being the author's debut book, it chooses to explore a topic which is uncharted waters for the vast majority of Indian literature I have had the pleasure to read - the life of a trans man. He makes the authorial choice of beginning the story after the protagonist has already transitioned into being a man, as he had always wanted to be, which makes for an interesting one, for although the undercurrent of Dr Kamat struggling with his trans identity is always present and seen, other aspects of his life also get their time in the limelight.

For all that the bare bones of this story might seem rather like a generic romance novel, replete with cliches, the way of chronicling the same breathes fresh life into what might otherwise be familiar and predictable.

Our protagonists are Dr Kaivalya Kamat and Aashna 'Aashu' Amberish. Something connects them the moment they first meet, which is revealed through the course of the book. The author handles this thin connecting thread quite sensitively, leaving the reader hanging on to each word of the reveal, for all that we might have foreseen it.

We are taken through a saga that spans company rivalries, family feuds and childhood sweethearts. The major issue I had with the handling of the story was that the climax of the romance arc seemed tied a tad too neatly, and the ending far too rushed. Another quibble is the fact that societal problems such as the stigma associated with marital abuse or divorce is barely referred to, despite finding a mention, but given the scope of the story, it is understandable.

More than the familial struggles, which left me wanting the elders to be more than what they were, to be given a voice, it was the way of writing the two main characters that kept me as a reader hooked, the little hints to a backstory that is slowly fleshed out being the highlight of the book.

In summation, I would say that the book is an absorbing read although the formatting of the e-book might be a little jarring, the twists, and turns foreseeable to a large extent, I find it worth a recommendation because of the way the character motivations of the protagonists have been portrayed.

Ghost Stories In My Head

Hey Dad!

I dreamt about you last night.

You came back alive! You were so full of life. You lit the room up with your tenacious smile. Everyone was happy to see you, Dad. Why wouldn't they be? You'd fallen off a cliff. No sooner had we thought you were gone than you came back up in a hot air balloon.

Everyone but me was happy. While everyone sighed in relief on seeing you up and healthy and snuggled up to you with love, I sank into the backdrop. Darkness engulfed me. My heart was being weighed down, and the world was caving in. I could hear laughter and merriment from a distance. I moved backwards and further backwards- away from the joy of life. It was pitch black all around. Gravity pulled me down, and I sat down thunderously, clenching my hair with both my hands. Guilt struck me like lightning.

How could I have missed you every millisecond of that fall yet not be delighted to see you ascending with life? How was I so used to missing you already?

You were falling, Dad. I thought you were gone. I knew I had to move on, but I also knew that I couldn't do it without you. So, I let your ghost creep in and harbour my headspace. Pendulous mood swings swayed my delirious mind- on top of the world or down six feet under. There was no in-between. I got addicted to the acrimony you made me dissolve into.

I shut myself off from this cruel world. I began to function on my own. You were the genie that helped bridge my small, ambiguous world with reality. I was ready to get on with life. I accepted that dark and gloomy were the adjectives I would use to describe my life. I let you carry me, no questions asked.

When you came back up, you sucked your ghost out of me. You had dug a pit and left me stranded in there. How do I get back up? A million of you resided in different lives of the humans you had touched. You were omnipresent. Now, it was just one of you with a complete body and a single soul. You weren't mine anymore.

You no longer watched over my shoulder everywhere I walked. I couldn't comfort myself any longer by consciously retrieving and talking to the ghost that lived in my head. You were alive, Dad. And it had changed everything.

My heart started thudding with anxiety. I was drowning in a sea of guilt and sorrow. I gasped for air. I opened my eyes, and I saw the dysfunctional ceiling fan running in circles.

You were still gone, Dad. I gently closed my eyes for two, and I felt your caressing kiss on my forehead. I woke up with a smile that embraced my pain and heard your voice go, "Hi, Great! Good morning!"

I knew you weren't physically present, but I felt your warmth nuzzle up against me. I was only hanging in there, but I was surviving. My head stayed put, and I was ready to face another day.

Baby Blues



Tread carefully, this is a safe cove of my precious thoughts.

Throughout the length of my last two years, I was so excited at the thought of diving into the world that isn't Mysore. Albeit, I had this whole regime in place at home. I used to play with my dog, workout, learn tennis, play badminton, learn that one new song for days together on my keyboard, sing endlessly, choreograph elaborate dances and never follow through on filming them and catch a sunset or sunrise daily on my checkerboard terrace. It was a beautiful, wholesome, fulfilling regime, no doubt.

The call to come to JIPMER could honestly not have come at a worse time. NEET had just gotten over, and I was ready to conquer the world. I did not have even the slightest inclination to leave everything I knew behind and start an uncharted course. Yet, here I was, fresh out of ideas, high on vacation adrenaline, trying to wield the vast knowledge that I thought I had in a colossal ocean of new everythings.

Never did I feel more out of place, lacking in confidence, missing the people from home, missing the girl I was and the parts of me that I lost on arriving here. I do nothing that I used to do before, and I'm used to nothing that I do now. A turn of tables is a pathetic understatement. Not even getting into the academic insecurities, I feel like I've forgotten how to be myself on getting here.

I expect huge things from myself. I want to have a layered personality with varying complexity levels. I want to be magnetic and charming. I want to be humorous and easygoing. I want to be dedicated and carefree. I want to have strong morals and principles and be sure of who I am. I want to balance the work and fun in my life and be that super-girl.

Instead, I barely call home, do nothing in particular and everything in general. I'm working on having a more structured life. I've been trying to get over this funk and reconquer those parts of myself: one territory at a time. Somehow, this is a time where I don't believe in myself as much as people from home do, and it's absolutely gratifying to have them in my life. I can sense the changes coursing in my veins, my heart will soon start thumping to a different rhythm, and I'll always sing the chorus.

-Sanjana Kumar
2k20

Censure to Cynosure

“You do realize that you’ll never be as good as Elizabeth, don’t you?”, said Michelle.

“Why would you say that?”, asked Allison.

“Because she’s smarter, prettier and way more friendly and outgoing. You could never match that. Makes it harder that she’s your sister, but you can’t change the facts.”

Shamed into silence, Allison resumed sipping her coffee.

“And,” Michelle continued as she got up to leave, “if you loaf around here, you aren’t even going to finish that project you started last week.”



Allison pondered over Michelle’s censorious remarks. There was certainly an element of truth in them. After all, she wasn’t the smartest or prettiest lass around. She was, in her own considered opinion, average. At everything. One day, Allison thought, she would have no need to bother about all the wanton, unwanted criticism abounding in every corner of her world.

She wished that day would come sooner; she wished she had the mental power to ignore the barbs and focus on herself. She wanted someone to reassure her that she was perfect just the way she was. Well, no one would ever say *that*, she scoffed. She began to embrace the feeling of worthlessness brought on by Michelle’s comments. It allowed her to wallow in self-pity, and she derived a strange satisfaction from it. But nothing could dull her perception of her inadequacy.

Trying to cope with her feelings, Allison began to list out her faults. Her lack of dedication to her work, her limited creativity, her displeasure with what the mirror showed her every morning, and the dearth of close friends. She took a deep breath... and realized that she was done. The list that she had anticipated would be endless was actually complete. Of course, she’d remember other things to add to the list later, but for the moment, her problems were finite. And, it slowly dawned on her, solvable. Not one of her flaws was written into her genetic material, she smiled. She could work on improving her imperfections and change herself to become the person she wanted to be.

She drained her mug of coffee and shook her imaginary friend Michelle out of her mind. As she left the café, she realized that self-appreciation wasn’t about accepting herself for who she already was, but about accepting her shortcomings and working to remove them from her life. And then would she become the cynosure of her own mind’s eye.



I feel like I want to learn new things in college. At the same time, I feel burnt out. How to balance these two emotions and prevent burnout?

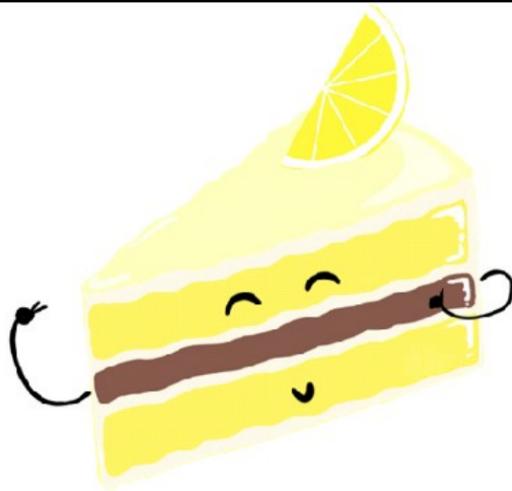


We all have just 24 hours a day. Of course, studies must be our priority because that is what we came here for – to become a doctor. However, this is also the age to gain new skills and hobbies.

You may need to prioritize which skills or hobbies you want to pursue and see if you can invest sufficient time to learn it. Keep adequate time for socialising with your friends too. Balancing and keeping some leisure time will prevent burnout. As they say – “All work and no play make Jack a dull boy.”



I am always available at anyone's beck and call but I don't get any help when I am the one in need. I realize people take advantage of my good will but I can't stop going out of my way for others. What do I do to fix this?



If you are kind and helpful to other by nature, it is good and there is little you need to stop it. Continue the good work.

It is equally important that you get help when you need it. When you need help, feel free to ask a friend. When they do not help out, you can try to tell them how you feel when they don't help you. Some friends who are sensitive and truly your friends, will understand you and change their ways. Every relationship is built on give & take. We need to give as well as take and that sustains the relationship.



Even though I try to be a part of the student friend groups in our batch, they don't really want to accept me even though they don't say it out loud and hence it is difficult for me to find new friends and I feel alone. What can I do to fight this loneliness?



In a group everyone is different. Some of us interact more and others interact less. We are able to fit better in some groups and not so well in others. Don't be bothered whether you are accepted or not. You can just be as

you are and accept yourself – automatically the others will accept you too. If the activities of the group do not interest you, find some other group. Do not feel the pressure to fit into a group whose activities you do not like.

*Answered by
Dr. Balaji Bharadwaj,
Dept. of Psychiatry,
JIPMER*

NOTE: Questions are compiled from suggestions by students. Students can submit their questions at <https://bonfire.jipmer.net/student-query/>.

Multiple questions from student entry form are compiled into questions for publication. Appropriate expert is chosen to provide the answers to the questions. The selection of questions for publication and experts are purely editorial.

For immediate help during crisis, JIPMER Students, residents and faculty must use the following services:

JIPMER Crisis Helpline (24x7)
Call: 780-691-3160

Students' Wellness Center:
Student Counsellors are available every working day from 3:30 PM to 5:30 PM, at Students' Wellness Center, Third Floor, JIPMER Academic Center, Dhanvantari Nagar, Puducherry – 605006



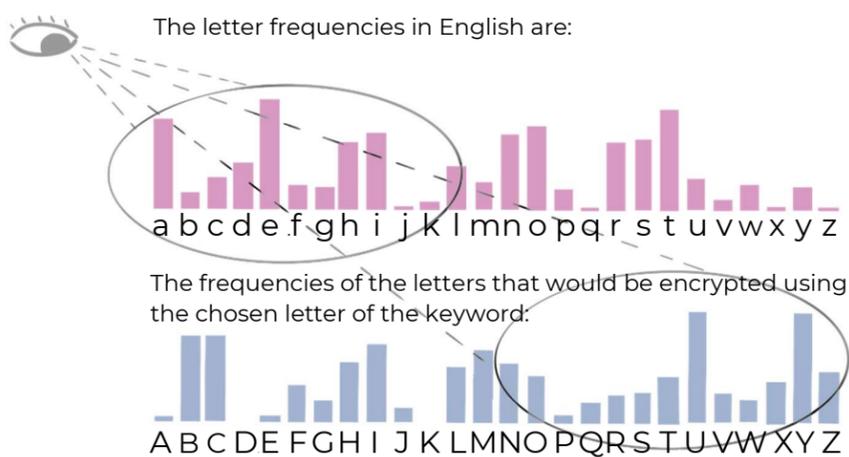
Cryptanalysis – Kasiski Examination

Vigenere cipher was considered to be unbreakable in nature for practical purposes, and it indeed was. However, this ended when Friedrich Kasiski devised an ingenious method to break the Vigenere cipher. Even though it was later discovered that Charles Babbage had also discovered the same method years back, he had never actually published it.

At the outset, let me tell you that unlike other issues, it won't be possible to use a ciphertext example in this issue as this method can only be demonstrated on substantially long ciphertexts. If you recall the encoding method of Vigenere cipher, you will recall that it is basically a set of Caesar ciphers. If we can find out the length of the key used to encode the plaintext, the cipher becomes vulnerable to frequency analysis. Now, in a long enough text, you will observe repetitions of letter groups. Even though there will be some instances where these two letter groups represent different plaintext, the majority will be cases where the same plaintext has been encrypted by the same sequence of the key. We will now see how we can use this vulnerability to crack open this cipher.

Let's consider we have found 'AEDK' twice at a gap of 24 letters. We also find 'WDUJ' twice at a gap of 36 letters and 'QVGH' twice at a gap of 18 letters. In a long ciphertext, you will find enough such repeats to ensure correct interpretation even if some of these turn out to be different encrypted

plaintexts. For the sake of this example, we see that the interval between repeats are 24,36 and 18. The common factors for these are 6,3 and 2. In a long ciphertext, it will be possible to guess which of these is the most probable length for the key by looking at the number of repeats of multiples of numbers indivisible by 6 but divisible by 2 or 3. Alternatively, we can also consider each of these as possible key length, run frequency analysis on respective letters and see which frequency histogram structure most closely matches the structure of the frequency histogram of the English alphabet.



Graphical Representation by Hasitha Tipparaju, 2k19

Once we have the length of key, we can divide up the entire ciphertext into individual Caesar ciphers. For example, for a key length of 3, QWGGTYUHHJIYY can be divided into three Caesar ciphers comprising of QGUJY, WTHI and GYHY respectively (First group comprises of 1st, 4th,7th,10th,13th; second group comprises of 2nd, 5th,... and so on). Frequency distribution histograms are made for groups of plaintext letters encrypted by each such letter of the key. This is compared with the normal frequency histogram of the English alphabet. Peaks, troughs as well as flats can all come handy in identifying parts which are similar to the normal frequency histogram of the English language. This helps us find by how much the histogram structure is shifted, i.e. the shift value for Caesar cipher and hence we get our letter. We repeat this for all letters of the key till we obtain the entire key and then use it to decrypt our ciphertext.

The above method is made far easier by computers and slight inaccuracies can also be easily dealt with using guided bruteforce attacks. Even though neither the Vigenere cipher nor this cryptanalytic method is used anymore, it was still an important development in the history of cryptography because for the first time, a cryptanalytic attack for a polyalphabetic cipher had been discovered.

This brings us to the end to Krypto. We hope, in the past few issues, we have been able to bring some interesting insights into cryptography to you. This section has been just a small window to the vast world of ciphers. If we have truly stirred your curiosity, please use the various free resources available online to delve even deeper into this world.

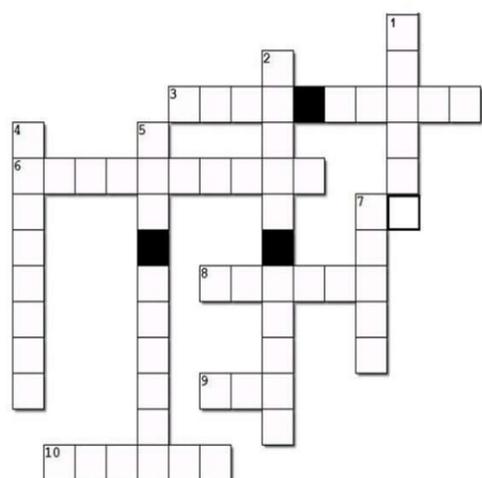
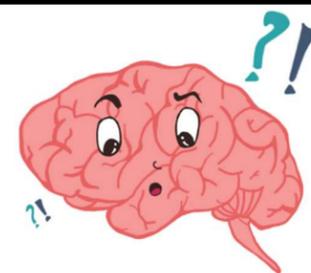
Ciao.

-By Souhardya Nandi, 2k19

The correct answer to the previous issue was **YOUAREYOURHOME**.

Chibhisha Managsha was the first to send in the correct answer. Congrats!

Let's Rewrite the Stars



Across

3. Polaris lives here. (4, 5)
6. The 'M' shaped queen. (10)
8. The Twins. (6)
9. The king of the forest. (3)
10. The bull. (6)

Down

1. The crab. (6)
2. The constellation with Sirius. (5,5)
4. Poison sting. (8)
5. The big spoon. (3,6)
7. The three-star hunter. (5)

Crossword by Sraavan Garikepati, 2k18

Please send in your answers to bonfire@jipmer.net. Answers will be published in the next issue.

Yours Quizzically!

What means of acquiring knowledge could be as fun and energising as a good ol' fashioned quiz!! Solve this question and do let us know the answer at bonfire@jipmer.net.

Quiz Question #6:

This is a fern, which is available only for a short period of time during spring. It grows in the wild, in certain parts of U.S.A and Canada and is eaten as a vegetable. What is the name of this fern?



Quiz by Oishe Mukherjee, 2K19

Stay tuned for the next issue of Bonfire for the answer!

Answers to the Previous Issue:

Nostalgic Euphoria II (Crossword):

1. TELETUBBIES
2. DORAEMON
3. DRANZER
4. GARUDA
5. BEAUCEPHALIS
6. NOVA
7. TUFFY
8. POPEYE

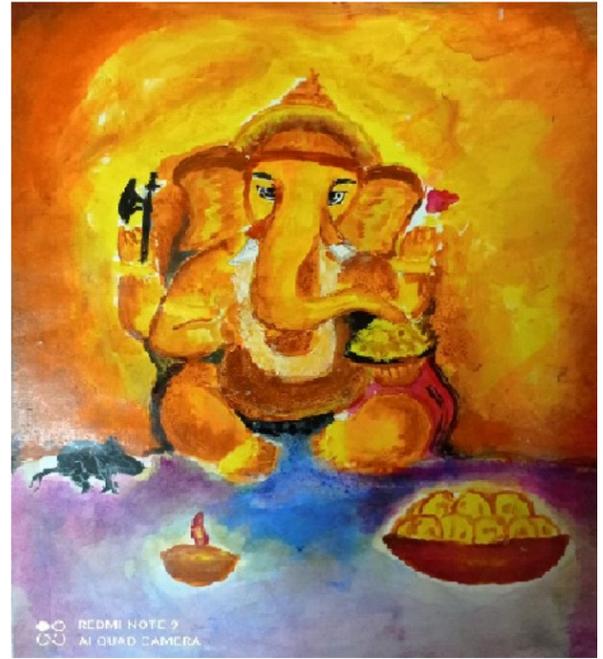
Quiz Question #5:

The film director shown in the picture is none other than Satyajit Ray.





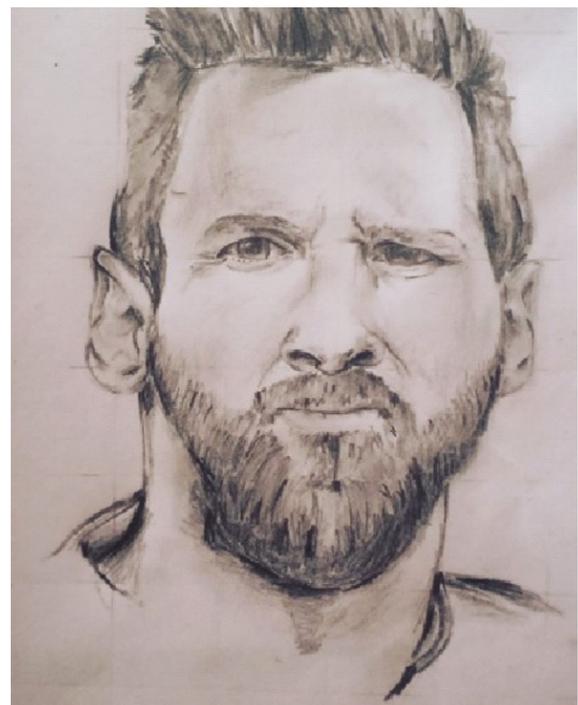
-Himadri Sarkar, 2k18



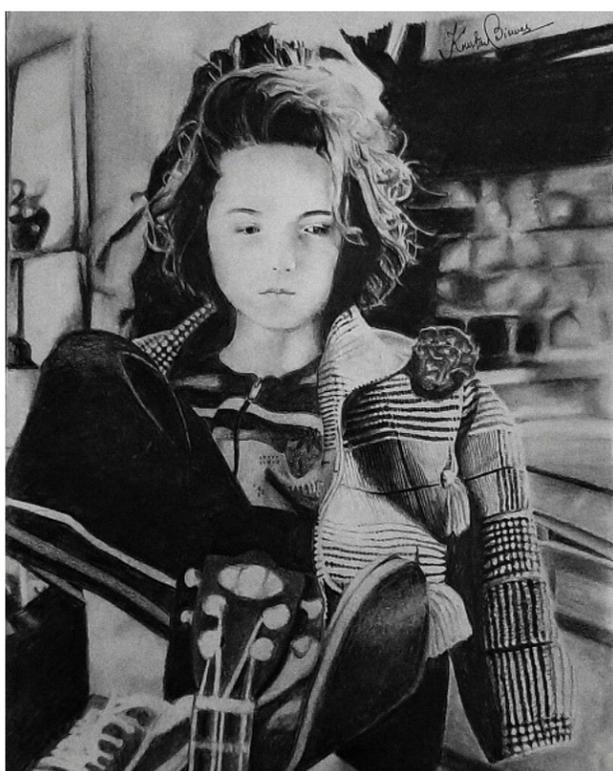
-Harshitha Shree, 2k20



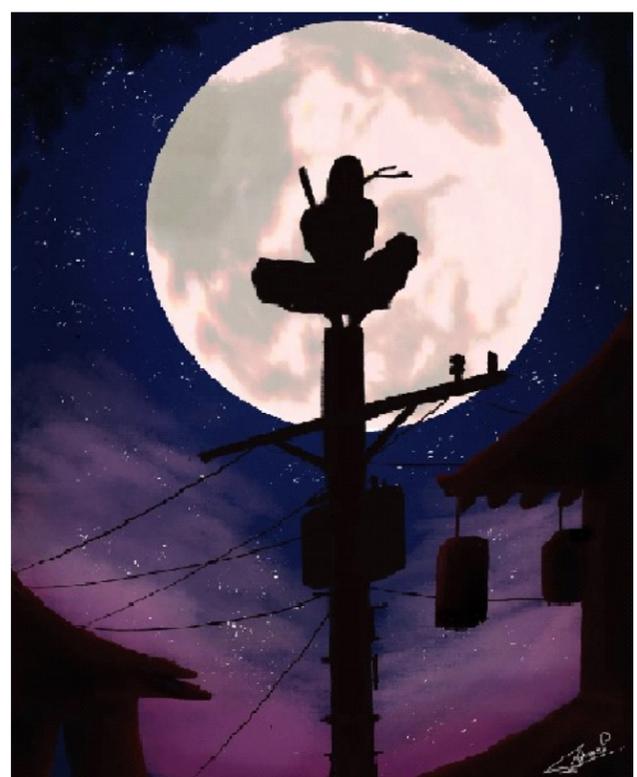
-Hamdan Rishin, 2k19



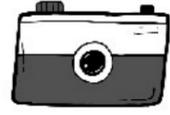
-Vighnesh, 2k19



-Koustav Biswas, 2k19



-Vighnesh, 2k19



By Aravind Ravi, 2k18