

# Crucible–ISTE & IE-E&C's Tech Week

Lazertron | Arnaav Anand

Lazertron, held on January 22, 2020, vibrantly kicked off Crucible as participants gathered in AB5 with a brimming exhilaration at the prospect of the event to come. The five teams that participated sat patiently and chattered amongst themselves as the organisers set up mazes in an adjacent room. The contestants were then briefed about the rules of the competition. The contest was divided into two rounds, mutually exclusive of each other. The points were tallied cumulatively after both rounds.

In the first round, each team was given a set-up of black cardboard in the form of a maze, equipped with apparatus including mirrors and a laser pointer. They were to guide a laser from one point of the maze to the other, aided by the concept of reflection in mirrors by varying angles correspondingly. The points were decided based on the time taken as well as the number of mirrors used. The initial stipulated time was ten minutes, with a grace period of five minutes. Teams were called in one at a time, and they worked collusively to settle the bout by integrating values of teamwork and coordination. After a thrilling endeavour, two out of the five teams were successful in their attempts to draw the laser out.



The second round proved to be simultaneously frustrating and vivacious. The teams were made to close their eyes and surrender their phones as they entered a completely dark room one after another. They were instructed to circumnavigate the room armed with just one laser pointer per person in order to

seek and find mirrors, lenses, and prisms hidden across the room as well as identify them, the latter of which would invite a point dockage if done incorrectly, in a time constraint of seven minutes. The teams set out to forage every nook and corner of the room, leaving no stone unturned in their pursuit.

*“It was overall a nice experience, and we really had fun. It would’ve been better with more publicity and participation”*, said Krushi Jethi, one of the participants. As a testament to the fact that this event was the only one among the others to have taken place last year as well, it was quite evident that the teams had a lot of fun.

### **Exquizzite | Aditya Narayan**

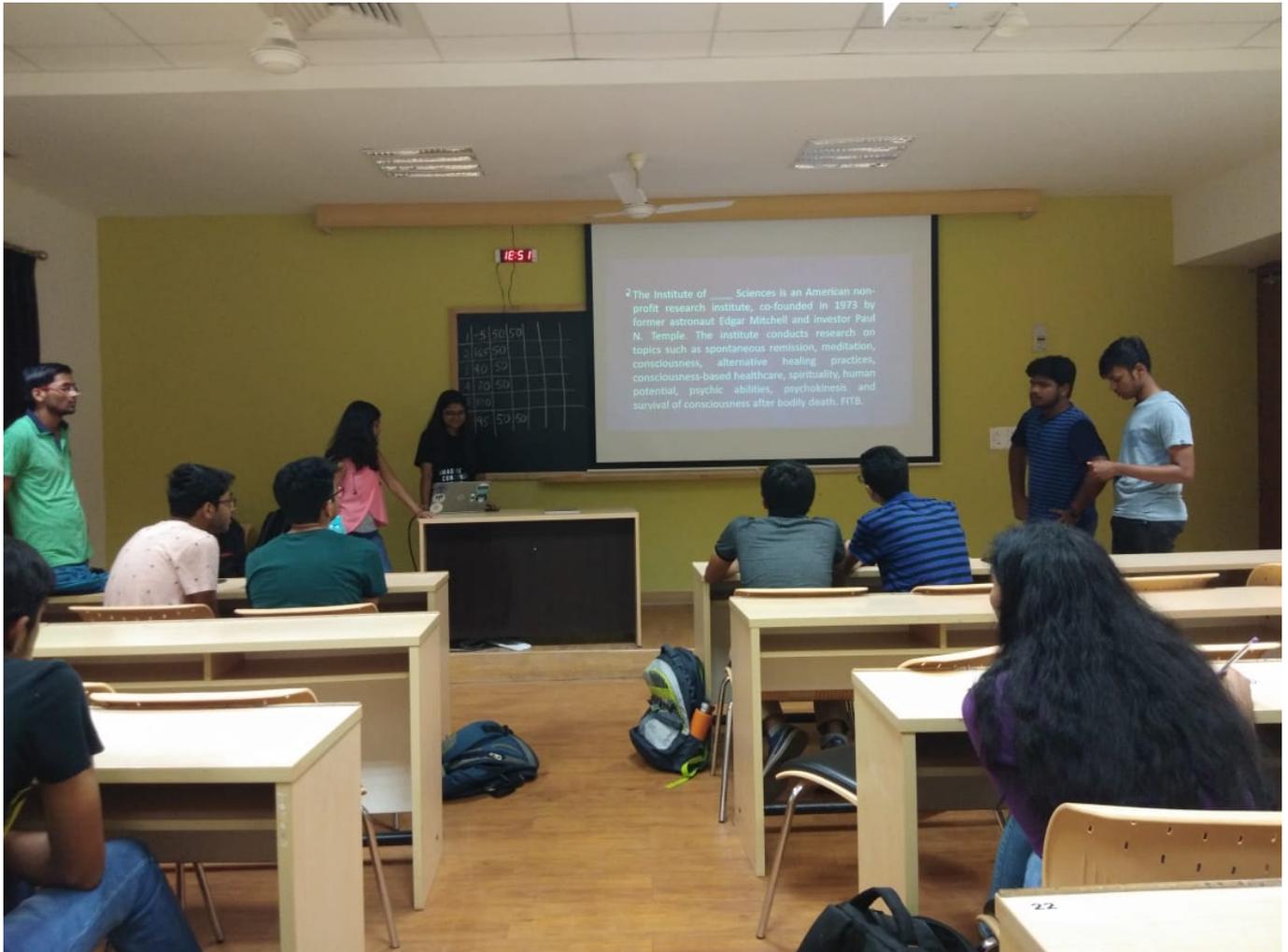
Exquizzite, held on January 23, 2020, was the last of the four-part event ‘Crucible’ jointly organised by IE-E&C and ISTE. Set to test general knowledge, abstract thinking and deduction, the thrilling quiz left participants hanging as they attempted to pursue the undisclosed cash prize. While lone competitors were allowed to face strong competition, a maximum team size of two members was encouraged to compete in the two intense rounds.

The first of the two rounds—the screening round—consisted of a questionnaire that tested the basic mental calibre of participants. The sheer toughness of the round reduced the number of teams by more than half—of the fourteen teams that took part in the challenge, six made it to the second round with the highest score peaking at seventeen out of a maximum of twenty-five. *“We had a good run. A fluctuation of fortunes is part of the game. And the quiz was fun, even if we came last”* remarked Shravya Mallya and Parthiv Menon, participants from MIT.

The second and final round was a little extensive—the quiz had five rounds, each consisting of six questions with a total

maximum score of 1500. The rounds spanned a wide range of topics from sports to politics including questions that covered pop culture, art and technology. The questions were described in a variety of ways—some were long paragraphs while others were mere images, with a few problems being a combination of both. The questions were vague, often requiring contestants to analyse deeply and look for clues.

The marking system was a little elaborate. Each team was given a question to answer, and a failed attempt would give other teams a chance to 'pounce' on the problem. If teams pounced on the question, they had to get the answer right—failure to do so would result in a 30-point reduction of scores. However, correct answers boosted the teams' score by 50 points. If the initially assigned question was left unanswered, the pounce window would close, causing the problem statement to 'bounce' across each team. A correctly answered question awarded the team with a 50-point bonus marking the end of the round.



Despite the improbabilities of each task, each team manage to bag a score. To provide some leeway for the participants, a few easy questions were scattered throughout. Questions covered a range of difficulties—the few simple questions came to be a surprise when competitors were unable to answer them while others were downright outrageous much to the chagrin of the contestants.

The tension in the room was palpable—A trick question saw four of the six teams pouncing, with all of them getting it wrong, resulting in a thirty-point setback. The second-placed team came to within thirty points of the leading team at the very end and were almost set to win the event. Despite the final gap between the winning team—third-years Sahana and Rishabh—and the second-placed—first-years, Neil Noronha and Tanmay Nargas, being a huge ninety points—there were times when it seemed that fortune would change hands. Despite the

array of events, the crown landed on the hands of the third year pair as they scored three hundred and thirty-five points out of the maximum of fifteen hundred.

*"We had a very good shot at winning it. We were within striking distance, but one question is all it takes. Still, it was fun, and we're happy we placed second"*, remarked Neil and Tanmay.

*"We are happy we won! We were prepared, and we had luck on our side too. The end was exhilarating!"*, exclaimed the winning team, Sahana and Rishabh.

Exquizzite gave Crucible an exciting and fitting end, with its challenging questions and changing fortunes. The room sparked with excitement as participants raced to bag the winning prize. With the logistic skills of the organisers were put to the test during the hectic event, the event was nothing short of a success.

## **CodeBurst | Tejas Ramesh Sanji**

Crucible, a technical event jointly hosted by ISTE and IE-E&C on January 24, 2020, was on full throttle with its third event, CodeBurst. The two-hour event was a battle of wits and coding skills as participants used their talents to bag points for their tables.

It was an intense contest amongst fourteen participants as they attempted to solve the given problem statements. The problem set consisted of twenty questions divided into three sections. The first section had eight relatively easy questions for ten points each. The second section saw an increase in the difficulty level, which was compensated with a ten-point rise from the previous round. The six questions in the final section were relatively advanced for anyone who was new to competitive coding, though the thirty points that came with the correct solution gave a boost to a contestant's score.



When asked about the turnout, the organisers were pretty satisfied. *"We made sure there were equal chances for anyone to win. Even amongst the difficult questions, only three were very complex. The others could be worked out after some thinking. We expect more participants next time"*, responded Ojaswi Bhimineni, an organiser for the event.

A few participants were underwhelmed by the challenge the competition had to offer, preferring an increase in the level of difficulty of the event which they implied would make the contest more interesting. Others cited mismanagement, as a result of which they were a little disappointed with the way the event was conducted.

Sparsh Agrawal, a third-year student, emerged victorious with a score of 280, thus concluding another day of competitive coding.

### **Rig It Up | Atharv Negi**

Rig It Up, conducted by IE&C on January 25, 2020, saw the participation of numerous two-person teams. The qualifying round saw teams building circuits based on slips that contained a circuit diagram all within the bounds of a time limit. While such a task was challenging on its own, qualifying teams soon realised that it was but a taste of the real task that was at hand.

The members of each team were made to sit with their backs to each other. One was handed a sheet with a complex circuit diagram while the other was handed the required components. The organisers kept a strict vigil to ensure that no eye contact was made between the two partners, and only verbal cues were permitted as a means of instruction between the two partners. The contestants were scored on the basis of circuit accuracy and the duration they took for completion.



When asked about how they drew inspiration for the event, the members of IE&C elaborated on how the best engineers in modern society aren't evaluated only on their technical ability, but also on their communication and interpersonal skills. As corporations and the world move on to tackle problems of increasing complexity, a great engineer must be able to operate as part of a team unit, communicating their ideas effectively and with efficiency. Participants, while initially concerned about time management, had an electrifying evening developing signals, both verbally and on a circuit.

*Image Credits: Organizers of Crucible*