CHEM-E-CAR

Do you have the perfect chemistry with your car?

INTRODUCTION:

The Chem-E car is a competition in which engineering undergraduate students are challenged to design and build a shoebox-sized car powered and stopped by *chemical processes*. The car does not compete in a race, but rather in an accuracy test. The car moves and stops at a set distance using controlled chemical processes. The winning automobile is the one that comes the closest to hitting the target solely based on chemistry.

PRIZE MONEY

1st prize: 8000
2nd prize:5000
3rd prize: 3000

PROBLEM STATEMENT

ROUND 1 :

- The teams have to submit an Engineering Design Package (or EDP) of their working model by the posted deadline.
- Failure to meet the posted deadline will result in exclusion from the competition. The layout of the EDP is attached below.

EDP Layout: Chem-e-Car .docx

ROUND 2:

- Each car will be given two opportunities to traverse a specified distance.
- The required distance will be given to each team one hour prior to the start of the performance competition. The distance will be between 15 and 30 m ± 0.005 m
- The teams have to run their working models on the specified track and execute the stopping mechanism for a specified distance.
- All the teams will be judged on the basis of how close their car gets to the end line in a specific amount of time and winners will be decided on this basis.
- The judges' decision will be final on all matters.

CONTACT DETAILS:
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TRACK SPECIFICATIONS:

track_figure.pdf

- The course will be no more than 5 meters wide in a straight line.
- The car will start with its front end just touching the designated starting line, with the goal of keeping the car in bounds to a designated finish line. The performance is determined by the distance from the front-most point of the car to the finish line, whether or not the car stops before or after the finish line.
- A vehicle that goes out of bounds will be given a penalty for that run of 3 meters.
- "Out of bounds" is defined as when any part of the car crosses or touches the boundary. If the tape is used to mark the side boundary or the out-of-bounds after the finish line, the inside edge of the tape is considered the course boundary (If a wall is set as a track boundary then contact with the wall is out of bounds).
- If the car starts going backward at the starting line, the score will count as 0m traveled.
- The site location may also dictate an out-of-bounds region past the finish line. Vehicles traveling across the plane of the out-of-bounds region will be disqualified for that attempt

STARTING LINE PROCEDURE:

- The car must start moving, traverse the distance, and come to a stop within a 2-minute time interval.
- At the starting line, 1 team member will be asked to head to the finish line. Team members are responsible for picking up their car after the distance is measured.

Once the car is placed on the starting line and the 2-minute time interval begins, all wheels must remain on the ground. Pushing the car or picking up the car/part of the car will result in a disqualification for that attempt.

REGISTRATION DETAILS FEES:

Fees: Rs.100
Register at: **https://mindbendsvnit.in**

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