



Getting lost in the glitz and glamour of the city has always been easy. An alien gets lured into this hunty trap and has to make its way without creating a spectacle of itself. Time for some classic traffic dodging and crazy driving skills. Get as maverick as you can. So, do u think you can handle the rush?

Event Category: Manual Robotics

Problem Statement: Build a robot (wired/wireless) that is capable of traversing the arena manually bypassing the hurdles in its path.

## **TASK**

- Traverse the arena manually through all types of terrains, sharp turns, rough paths, undulations, zig-zag wedges.
- Perform tasks like dragging blocks, etc.

### **GENERAL RULES**

- A maximum number of participants allowed per team: 4 people.
- The participants will be provided with 220 Volts, 50 Hz standard AC supply.
- Participants will have to themselves arrange for any other power supply required for their robot.
- Teams cannot tinker with their bots during the run.
- LEGO kits or its spare parts or pre-made mechanical parts are not allowed.
- The decision of the coordinators will be final and binding.
- One person cannot be a member of more than one team.
- Bot cannot be shared by any 2 teams.





\*\*The rules are subject to change.

## **EVENT RULES**

#### TIME TRIAL

In this round, the bot has to traverse the track solely.

- The robots will start from the point marked as "START" on the arena.
- The total track will sub divided into parts using checkpoints.
- Selection of teams for next round will be on the basis of points gained in preliminary round.
- Point can be earned by crossing the checkpoints, bonus points will be awarded for completing the race before given time.

#### **KNOCKOUT**

In this round, two bots will compete against each other.

- This is a one-on-one event in which two robots will take on each other at a time.
- Each robot has to try finishing the race first.
- The robots will start from the point marked as "START" on the arena.

Only teams qualifying this round will be considered for the next round.

## ROBOT SPECIFICATIONS

- Maximum allowable dimensions of the bot will be 25cm x 25cm x 25cm with a tolerance of 5% in the dimensions of robot.
- The maximum weight of the robot is 2.5 kg.
- The robot can be powered on-board or off-board.
- The potential difference between any two electrical points on the robot must not exceed 24 volts throughout the run.

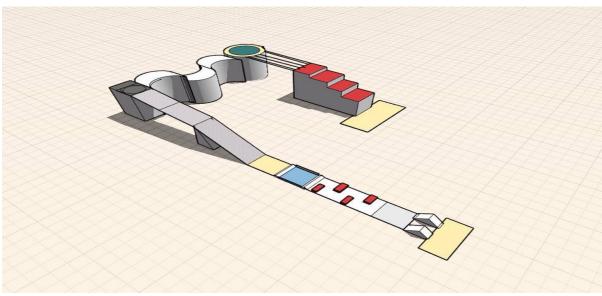




## ARENA SPECIFICATIONS

- The arena will contain obstacles in the form of sand, gravel, mud, bumpers, stone chips, marble balls, broken glasses, etc.
- The arena will be 10-25 meters in length.
- The length and constituents of the track may keep varying from round to round.
- The width of the arena will be approximately 3ft (92 cm).
- The arena will also include obstacles like cliffs, ramps, bridges, bumps, dips, rotating discs, seesaws banks and water bodies.
- The height of the waterbeds will vary between 3 cm to 8 cm.
- The maximum inclination of the inclined planes will not exceed 45 degrees.
- There may be some typical bypasses for shorter paths and for following the bypasses properly there might or might not be bonus points.
- If a robot damages the arena, a penalty might be imposed on the team's overall score. The magnitude of the penalty will depend on the amount of damage caused, and will be decided by the coordinators.

# **ARENA SAMPLE**



\*\* Arena design is subject to change.

<sup>\*\*</sup>The arena description is subject to change in different rounds.