

Battle for speed

Task:

Each team builds an autonomous line and path following robot. The robot follows the black line on top of the white plane as well as the path having a boundary on both sides.

Entry fee:1200.

Only for the teams who have not participated in the **rainy session**.

Specifications:

Dimension and Fabrications

1. The robot should fit within a box of dimension 20 x 20 x 20 cm (maximum size)
2. The robot's weight should not be more than **3 KG**.
3. Wired controlled robots are not allowed.
4. Use of **readymade toys** is not allowed, but one can use the readymade circuits.
5. Robots should be **autonomous controlled**.
6. **No weapons** (blades, spikes) of any kind are to be attached onto the robot.

General Rules

1. The potential difference between any two points must **not exceed 12V** at any point of the run.
2. Each team can have a **maximum of 5 members**(4 participants and 1 mentor).
3. At the time of Robot Verification Robot should be **20*20*20 cm** in dimension.

Robot Specifications

1. Each robot should be an autonomously controlled vehicle.
2. The dimensions of the robot should **not exceed 20 cm (l) * 20 cm (b) * 20 cm (h)**.
3. Ready-made toys, cars or Lego are not allowed.
4. Weight of the robot must not **exceed 3kg**.
5. Motor RPM should not exceed more than **150 revolutions per minute**.

6. IR sensors should **not be more than 3**.
7. Ultrasonic sensors should **not be more than 2**.
8. **Brushless motor** is not allowed.
9. Only **three wheeler robots** are allowed.

Arena Specifications

1. The arena is a simple rectangle base enclosed by a boundary wall (**height 20cm**).
2. There are two types of paths.

Black lined path	Boundary walled path
Width of the black line is 2.5 cm	Width of the path is 35cm
No boundary walls	Boundary walls

Game plays

1. The robot should start the run from the '**START**' mark and should end the run at the '**STOP**' mark.
2. If the robot runs out of the **track or border line**, it will be placed at the nearest checkpoint it has crossed.
3. Robot starts after the switch is turned on.
4. Two teams compete against each other in an identical arena.
5. The game will stop after one of the robots reaches the '**STOP**' mark.
6. **Fastest robot** to reach the '**STOP**' mark will be **declared the winner**.
7. The tournament will be played in a league and **knockout system**.

Game Rules

1. The race will start at the **whistle** of the referee.
2. Only **two players** from each team can enter the gaming zone.
3. The timer will start after the whistle.

4. If none of the robots completes the track within **3-minutes**, the robot with a higher number of checkpoints completed will be declared the winner.
5. The robot should not harm the gaming arena in any way.
6. The robot must have an onboard power supply.
7. The game referee will have the right to take the **final decision**.

Certificate and prize Policy:

1. Exciting **prize pool** from winner and runner-up.
2. Certificate of Excellence will be given to the winners.
3. Certificates of Participation will be given to all the teams who will play in the first round of the competition.
4. The teams which get **disqualified** due to disobeying any of the competition rules will not be awarded.

Registration starts at : **9 July 2022**

Registration ends at: **20 July 2022**

Arena description:

https://youtu.be/gZgWYR2P_IE

