



1. Route Ranger(Fastest Line Follower)

Task :

Bot have to follow a route with accuracy in a least time.

General Rules :

- Maximum 3 members are allowed in a team.
- Bot should be maximum size of 25cm*25cm*25cm(L*B*H).
- Only software control robots are allowed.

Weight Categories :

- Maximum 3 Kg
- **Robot Specifications :**
- There would be maximum size 25cm*25cm*25cm(L*B*H) of the bot.
- Maximum voltage must not exceed 12 Volts.
- The weight of batteries will also be considered during measurement.

Arena:

Playing field ground is white mat of size 6ft X 4ft where track is marked by a black line, approx. 1.5 cm wide. The line does not cross itself; however, it may split and re-join (in such case, the robot may take any of them; the paths can be however of different length).

Length of the Game:

- Maximum 3 minutes of the gameplay.
- Within 3 minutes of gameplay duration, teams can take as many as runs possible. The run with least time will be considered.
- If bot loses the track, bot operator must restart the run from starting point.



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2. Robo Soccer

Task :

The task takes place between two teams with one/two bots each team, chase ball around the big size arena with the aim to kick more goals than the opponent.

General Rules :

- Maximum 3 members are allowed in a team.
- Bot should be maximum size of 25cm*25cm*25cm(L*B*H).
- Remote or software control robots are allowed.

Weight Categories :

- Maximum 5 Kg
- **Robot Specifications :**
- There would be maximum size 25cm*25cm*25cm(L*B*H) of the bot.
- Maximum voltage must not exceed 12 Volts.
- The weight of batteries will also be considered during measurement. But the weight of the remote control will not be considered.

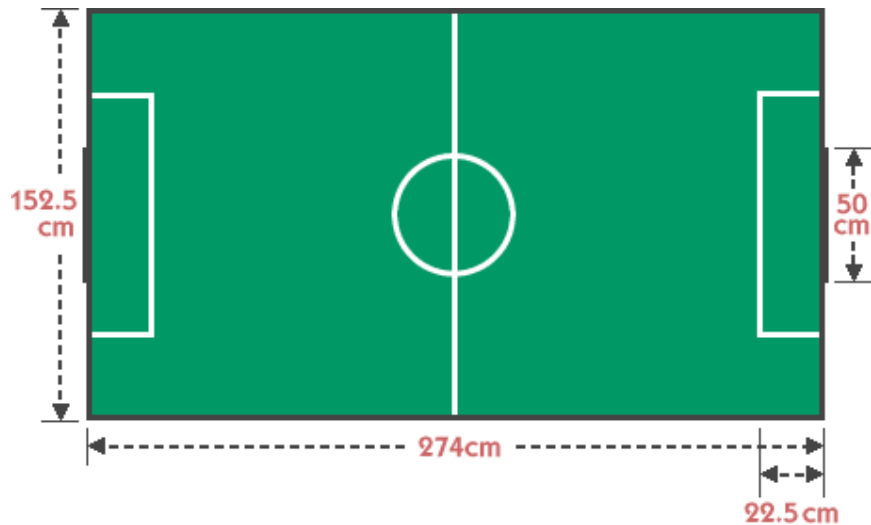
Remote Control Requirements :

- Teams can use mobile operated bots also.
- You can use a remote-control system from toys as well. You may also use remote control systems available in the market.
- Team must approve the Self-Made or Non-standard remote-control systems from the organizers.
- The team should pair up the wireless remote with their bot before putting it in the ring.

Arena :

The playing field must be rectangular and of following size:
Total arena size would be 152.5cm X 274cm. The exact field dimensions and field marking dimensions at the venue may vary by up to $\pm 10\%$ in each linear dimension.

It is a green mat with white walls and a number of whitelines on it (defence areas, centre line, centre circle).

**Field:**

The playing surface is the plane wood and floor surface. The floor under the carpet is level, flat and hard.

Goals:

The goals are 50 cm wide, each goal and the area of the field inside the goal is painted in a special colour (one blue, the other yellow).

Ball:

An orange/white table tennis(T.T) ball is used.

Length of the Game:

The game consists of first half, break and second half, each of them taking 5 minutes. The time stopped during interruptions of the game.

Fouls:

Fouls are called when a robot intentionally attacks another robot, when more than one defence robot enters the defence zone intentionally or when a robot tries to hold the ball or another robot. They result in a free kick or penalty.

Free kick:

The ball will be put at the closest of the free kick positions (equivalent to free ball positions), a robot of the team against which the foul was committed is allowed to stand directly behind the ball and play it.



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3. Robo War

Task :

The fight takes place between two robots, whose purpose is to push the opponent out of the ring.

General Rules :

- Maximum 3 members are allowed in a team.
- Bot should be maximum size of 25cm*25cm*25cm(L*B*H).
- Remote or software control robots are allowed.

Weight Categories :

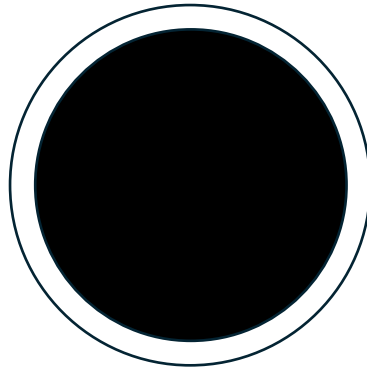
- Maximum 5 Kg
- **Robot Specifications :**
- There would be maximum size 25cm*25cm*25cm(L*B*H) of the bot.
- Maximum voltage must not exceed 12 Volts.
- The weight of batteries will also be considered during measurement. But the weight of the remote control will not be considered.

Remote Control Requirements :

- Teams can use mobile operated bots also.
- You can use a remote-control system from toys as well. You may also use remote control systems available in the market.
- Team must approve the Self-Made or Non-standard remote-control systems from the organizers.
- The team should pair up the wireless remote with their bot before putting it in the bot ring.

Arena :

The arena will consist of a flat, smooth, 180 cm diameter, circular plywood disk or floor painted with black paint. A 3-inch painted white border will be used to the edge of the arena. The arena surface will be raised slightly from the supporting surface, so it is obvious when a contestant has been pushed from the arena.



Black circle of diameter 180 cm along with A 3-inch painted white border

Length of the Game:

There will be 3 minutes for gameplay. Within 3 minutes of gameplay, we will count number of pushes push the opponent out of the ring. Higher the number of pushes will be the winner.

Weapons Rules :

Destructive weapons of any kind are not allowed. It may employ wedges, scoops, or hoists to unbalance or tip over opponent robots. Structural pieces which may become detached during the bout will be allowed as long as there was no obvious attempt to shed them. A robot may not release fluid. Robots may not include offensive weapons or mechanical systems designed to dismantle the opponent. Contesting robots are to be designed to primarily push, lift, rotate, tip, impede or overturn the opponent.

Objections :

- Yes, you can raise objections on the opponent team if their robot does not fight in a given class.
- If the Opponent team does not use specified voltage batteries.

Safety Rules :

- Special care should be taken to protect the onboard batteries, a robot without proper protection will not be allowed to compete.
- All participants build & operate their robots at their own risk. Please look out to not hurt yourself or others when building, Testing & competing. Any activity (repairing, battery handling, etc.) which can cause damage to the teams within the competition area should not be carried out without permission. A team which does not follow All the rules will be disqualified.

Important Note :

Participants should operate their bot at their own risk and shall be responsible for any mishaps caused due to their negligence.



4. Innovation Showdown

For this category feel free to make a project which provides a solution to one of the any SDG's problems. It can be a prototype, simulator base, presentation as well as significant ideas.

Structure Your Presentation :

- **Introduction:**
 - State the significance of the innovation.
- **Problem Statement:**
 - Clearly articulate the problem or need your innovation addresses.
- **Solution Overview:**
 - Describe your innovation, including its features and benefits.
- **Impact and Evidence:**
 - Provide data or case studies that demonstrate the effectiveness of your innovation.
- **Future Implications:**
 - Discuss potential developments or implications for the future.
- **Conclusion:**
 - Summarize key points and reinforce the innovation's importance.

Manage Time Wisely

Total time limit is 8 minutes. In which maximum 5 minutes for presentation and 3 minutes for question answering session.

- Allocate specific time for each section of your presentation.
- Ensure you leave time for questions and discussion.