

Manual Robotics

Introduction

Welcome to the exhilarating Manual Robotics Competition, where innovation meets skill and strategy in the realm of robotics. This event offers a platform for engineering enthusiasts to unveil their robotic creations, designed to tackle challenges, overcome obstacles, and perform intricate tasks in a dynamic and competitive environment.

Robot Specifications:

- The dimensions of the bot must not exceed 30cm × 30cm × 25cm (L × B × H).
- The motor speed for locomotion (wheels) must not exceed 300 RPM.
- Any grabbing mechanism for blocks must be integrated with the bot.
- The power supply must not exceed 12V and 2 Amp.
- Teams can use their own power supply or the one provided by the organizers.
- The power supply must be placed outside the arena.
- Only one person is allowed to control the bot at a time.
- The bot can have an onboard or remote power supply, but it must be controlled manually.
- Use of readymade Lego components or ready-made gripping mechanisms is prohibited. However, ready-made gear assemblies are permitted.
- Failure to meet any of these specifications will result in immediate disqualification.

Competition Arena:

- The competition arena will be revealed during the actual event at AXIS'25.
- The arena may feature obstacles such as marble trays, sand pits, slotted bridges, hanging bridges, see-saw planks, rocky ramps, and slanting roads.
- The width of the arena will be tailored to accommodate the size of the participating bots.



Competition Rounds

- This event may consist of 2 round, first containing static obstacles and second Round will contain mostly moving obstacles.
- Each team will run its manually controlled bot through the arena. This round is the qualification round to enter the next round. In this round, your bot will be tested structurally, mechanically, technically, and your skills of controlling the bot will be challenged to its peak. The bot must go through various modules (difficulties) as quickly as possible and cross the finishing line.
- If the bot has some technical issues, then the first technical hand touch of 3 minutes will be given to fix it. This time will not be added to the total time. (Teams should carry all required tools and other equipment.)
- If the bot gets stuck in any module or falls off the track, then the bot will be placed manually at the start of that particular module for which a hand touch penalty of 5 seconds will be added to the total time.
- Crossing Each module have reserved the variable points depending on the obstacle, bot can earn maximum points by crossing obstacles, bot having more points will be winner in that round, in case of same points bot taking less time will be win.
- The event organizers reserve the right to change any or all of the above rules as they deem fit.
- Changes in rules, if any, will be highlighted on the website and notified to the registered teams.

Robot Inspection

1 Pre-Event Inspection

Bots will be inspected by event organizers according to robot specification.

The bot would be checked for safety before starting and will be disqualified if found unsafe for other participants.

2 Disqualification Criteria

If bot failed to pass pre-event inspection, the team will be disqualified



Code of Conduct

1. Respect for Equipment

Only the event organizers are allowed to touch the arena. Participants are strictly Restricted from touching the arena during the game play. Bots damaging the arena may lead to direct disqualification of the team. The organizers will not be responsible for any damages to the bot during the Gameplay.

2. Judging Criteria

The final selection will be made by the net time, viz, the time after adding the penalties. The team with a lower net time will qualify. A robot will be declared immobile if it cannot display linear motion of at least one inch in a timed period of 30 seconds. A robot with one side of its drive train disabled will not be counted out if it can demonstrate some degree of controlled movement.

3. Dispute Resolution

In case of any dispute, AXIS Executive Committees decision will be final and binding

Note : Participants should register at UNSTOP

General Rules

1. Once the game has started, no modifications to the bot are allowed.
2. The time measured by the organizing team is final; no consideration will be given to the time measured by participants.
3. Team members are responsible for carefully handling the bot's wires.
4. Each team can have 1 to 4 members.
5. Team members can be from any institution.
6. All team members must carry their valid college ID cards.
7. A participant can only be a member of one team, and no teams are allowed to share their bots.
8. Teams will be notified of any changes to the rules as needed.
9. Event managers have the authority to modify rules under any circumstances.



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