STEM REVIEWED #46788206
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STEM CERTIFIED #46766422

Propeller Technologies
Research & Development Pvt Ltd.

TRL 2K21™

TAMILNADU ROBOTICS LEAGUE

SEASON - 4

BOT OLYMBICS

TAMILNADU ROBOTICS LEAGUE

INDIA'S BIGGEST ROBOTICS COMPETITION

SEASON - 4

THEME - BOT OLYMBICS

CHENNAI

For More:

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EVENTS AND REGISTRATION

Introduction

Welcome to the 4th Season of the Tamil Nadu Robotics League!
Inspired by the triumphs of the 2024 Olympics and celebrating the excitement of the upcoming 2028 Olympics, this year's theme, **"Bot Olymbics,"** brings the Olympic spirit into robotics. A platform where the spirit of champions meets the creativity of young innovators through robotics and STEM learning! Students from across the state will bring their robots to take on exciting and fun-filled challenges.
Just like the real Olympics, these tasks test speed, strength, teamwork, and smart thinking.Children will design and build their own robots to solve problems using creativity and logic. It's a wonderful way to explore science and technology while having fun. Through these engaging activities, the league not only celebrates the Olympic spirit but also promotes innovation and STEM learning among young minds.

Events

1. **Robotics Junior**: To solve the arena based on the problem statement

2. **Robotics Senior**: To solve the arena based on the problem statement

3. **Robotics Super Senior:** To solve the arena based on the problem statement

4. **Young Scientist**: Design a (Me & My Innovation) concept using your own creative ideas

Registration

> **The registration fee per student per event is Rs. 699/-**

> **Each team must consist of a minimum of 3 and a maximum of 4 members.**

> **You can contact the below-mentioned mobile numbers to initiate the registration process: 7540040071 / 7540040079 / 8248038462**

Event Venue & Date

Event Venue: Chennai

Event Date: January , 2027

AWARDS AND RECOGNITIONS

Robotics Junior

- Winner
- First Runner
- Second Runner
- Best Robot Design
- Best Rider
- Best Team
- Emerging Innovator Award

Robotics Super Senior

- Winner
- First Runner
- Second Runner
- Best Robot Design
- Best Rider
- Best Team
- Emerging Innovator Award

Robotics Senior

- Winner
- First Runner
- Second Runner
- Best Robot Design
- Best Rider
- Best Team
- Emerging Innovator Award

Special Category Awards

EMPOWERING EXCELLENCE AWARD

A school that encourages the maximum number of students to participate in competitions for broader exposure.

OVERALL CHAMPIONSHIP

The Overall Championship is awarded to the school with the most winning teams in various categories, celebrating their excellence and teamwork.

Young Scientist

- Winner
- First Runner
- Second Runner
- **Best Use of Technology:** Awarded to the project that utilizes technology in the most effective and advanced manner.
- **Most Innovative Solution:** Recognizes the most creative and unique approach to solving a problem.
- **Emerging Innovator Award:** For the best project by a team with members below a certain age, encouraging young participation.
- **Best Design:** Recognizes the project with the most aesthetically pleasing and functional Design.

TAMILNADU ROBOTICS LEAGUE - 2K27

India's Biggest Robotics Competition

Propeller Technologies
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Problem Statement:- Autonomous Relay Maze Challenge



In this advanced robotics challenge, **Super Senior** students will design and program an autonomous robot to complete a **relay race** on a line-following track featuring various **physical** obstacles.

Minimum Number of Participants: 3

Maximum Number of Participants:4

Time Limit: Complete all tasks within 3 minutes

Challenge Flow: Once the 3-minute timer starts, the challenge will unfold in the following stages:

Participant Tasks

- The robot must autonomously navigate from the Start Zone to the End Zone within 3 minutes, following the designated line-following track.
- Along the track, the robot must successfully navigate through two Dark Cave challenges, where the line-following path continues inside each cave.
- Each Dark Cave will be enclosed with a screen that blocks external light. The robot must enter by sliding past the screen, follow the line inside the cave, and exit successfully.
- Participants will be provided with a basic electrical circuit consisting of a battery, LED, switch, connecting wires, and alligator clip connectors to illuminate the Dark Caves.
- If required, participants must assemble the circuit by connecting the components using the alligator clip connectors and operate the switch to illuminate the cave, enabling the robot to detect and follow the line inside.

- Connecting and activating the illumination circuit is optional. Participants may assemble and activate the circuit at any time after the timer starts, according to their strategy and convenience.
- The entire challenge, including circuit assembly (if required), navigation through both Dark Caves, and reaching the End Zone, must be completed within the allotted 3-minute time limit.

Scoring Criteria

Task	Marks Scored
Robot has Olympic Rings symbol on it	5
Robot has team/robot name visibly labeled	5
Robot crosses Zone 1	30
Robot crosses Zone 2	10
Robot crosses Zone 3	10
Robot crosses Zone 4	30
Robot reaches the End Position within time	10
Total Marks	**100**

Note: The exact demo video demonstrating how the arena can be solved will be given to all registered participants 15 days before the competition. Meanwhile, students can build the robot, practice its controls, and understand the problem statements.

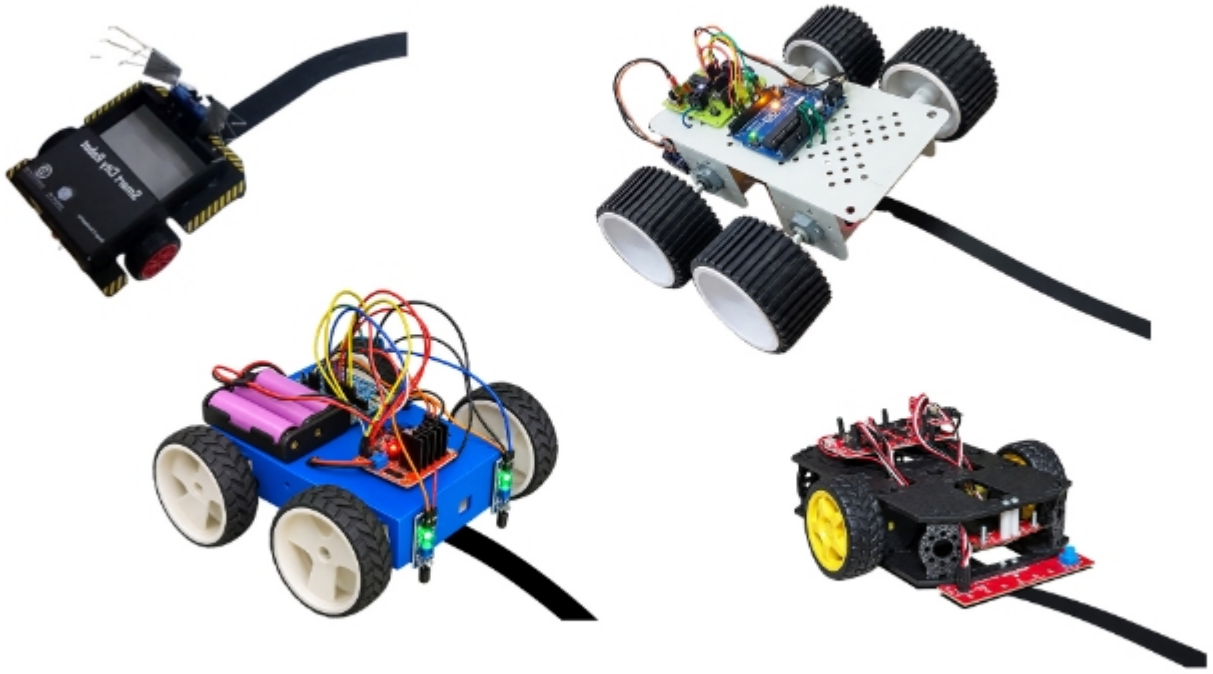
Robot Criteria

The robot should be a **Wireless Autononums Robot** which is capable of Completing the task. Participants are allowed to use any type and any number of sensors to solve the problem statement.

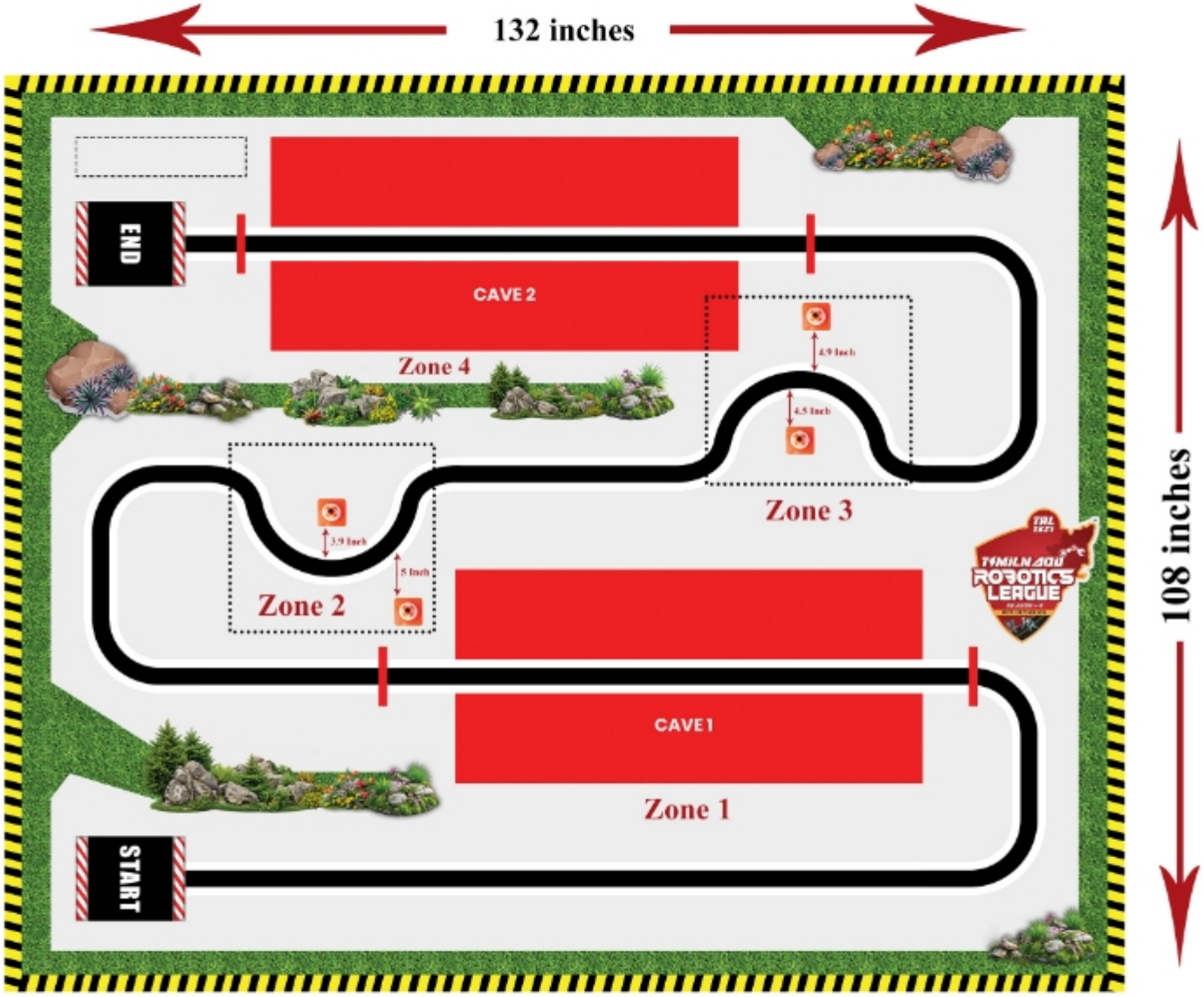
Dimensions of the Robot

Length	Breadth	Height
9 Inch (Maximum)	9 Inch (Maximum)	4 Inch

Reference Robot Design



Arena





The **black line is 2 inches wide,** with **1 inch of white space on each side,** making the t**otal width 4 inches.**



The **red line is 7 inches** in **height** and **1 inch in width.**