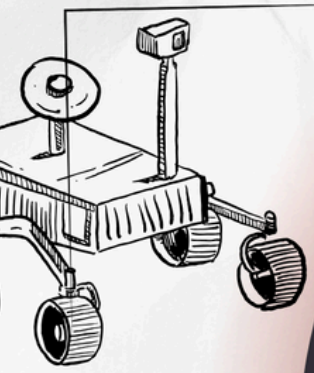
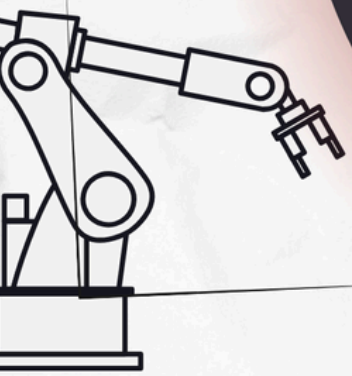
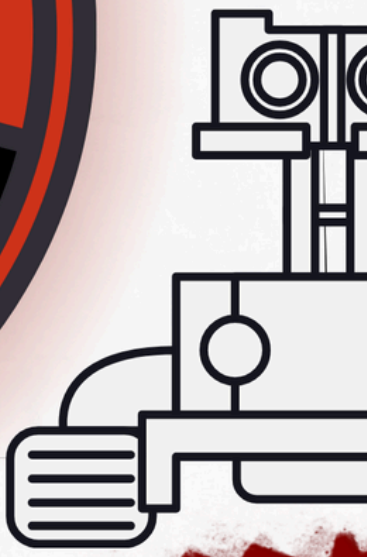
TEAM CYBERBOTS PRESENTS





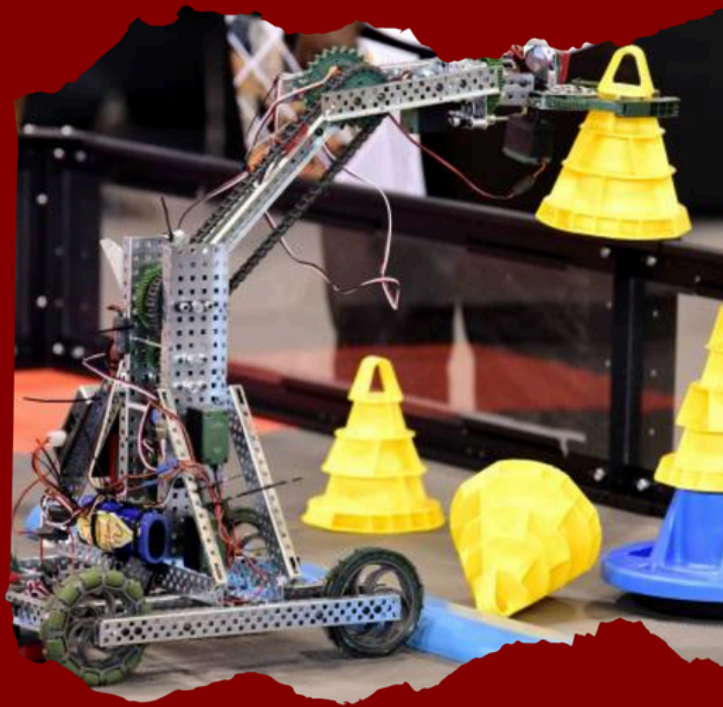


JOIN WITH US

SUDHARSANAM VIDYAASHRAM

4TH JANUARY, 2025
08.00 AM TO 04.00PM

VENUE: POONAMALLEE - AVADI HIGH RD, THIRUVERKADU, AVADI, TAMIL NADU 600077



WWW.CYBERBOTS.IN

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ZONE 2B GRADE 6-8

CYBER BOTS

PRESENTS

CYBERTRON

TORCHBEARER'S QUEST RULES

1. Introduction

In the "Torchbearer's Quest" challenge, teams of two robots compete in a thrilling relay race.
The robots, controlled via Bluetooth, must navigate a linefollowing course, pass a torch smoothly between robots, and light up an Olympic torch at the end. The course features a mist obstacle where pH paper on the bots changes color based on exposure time, affecting scoring. Teams must ensure smooth torch handoffs and manage pH paper color changes to maximize their score.

2. Mission Briefing

- Objective: Navigate the linefollowing course, manage pH paper color changes due to mist exposure, pass the torch smoothly between two robots, and light up the Olympic torch at the end.
- Course Challenges: Includes obstacles like mist and rotary gate that add complexity to the navigation. The pH paper on the robots will change color when exposed to mist, impacting scoring based on the duration of exposure.

3. Rules and Regulations

- Teams: Each team consists of two robots and their operators.
- Operators: Responsible for controlling the bots via Bluetooth, ensuring accurate line following, managing pH paper color changes, and performing smooth torch handoffs.
- Course Navigation: Bots must follow the designated line throughout the course without deviating.
- Torch Handoff: Must be smooth and precise at designated relay points to avoid penalties.
- Starting the Race: Begins with the first bot at the starting line with the torch.
- Relay Points: The first bot must pass the torch to the second bot at the first relay point.
- Lighting the Torch: The second bot must light up the Olympic torch at the final destination.
- pH Paper: Each bot is equipped with pH paper on both sides. When passing through mist, if a bot moves too slowly, the color of the pH paper changes, resulting in a reduction of points.
- Judging: Points awarded based on smoothness of handoffs, speed, accuracy in line following, management of pH paper color changes, and overcoming obstacles.
- Communication: Teams should communicate effectively to ensure smooth operations and efficient navigation.
- Course Modifications: Event organizers may modify the course and rules for safety and fairness.

4. Gameplay Overview

- **Relay Points: Designated spots for torch handoff.**
- **Round 1: Mist and Rotary Gate Obstacles – A low-lying fog that affects pH paper color based on the bot's speed through the mist, and a rotary gate that adds complexity to the navigation.**
- **Round 2: Mist and Rotary Gate Obstacles – Includes both mist and an additional rotary gate obstacle, requiring the bots to navigate through rotating barrier.**

5. Scoring Criteria

Round 1:

- **Smooth HandOffs: 20 points**
- **Speed: 20 points**
- **Accuracy in Following Line: 20 points**
- **Managing pH Paper Color Change:**
- **Minimal Color Change: 20 points**
- **Moderate Color Change: 10 points**
- **Significant Color Change: 0 points**
- **Teamwork & Communication: 10 points**
- **Overcoming Rotary Gate Obstacle: 10 points**
- **Total for Round 1 : 100 points**

Round 2:

- **Smooth HandOffs: 15 points**
- **Speed: 15 points**
- **Accuracy in Following Line: 15 points**
- **Managing pH Paper Color Change:**
- **Minimal Color Change: 30 points**
- **Moderate Color Change: 15 points**
- **Significant Color Change: 0 points**
- **Overcoming Rotary Gate Obstacle: 15 points**
- **Teamwork & Communication: 15 points**
- **Total for Round 2: 100 points**

6. Learning Outcomes

- **Teamwork: Highlights the importance of effective communication and collaboration between team members.**
- **Precision and Control: Emphasizes the need for precise control over robots and management of pH paper color changes.**
- **ProblemSolving: Encourages strategic planning to navigate obstacles, manage pH paper color changes, and ensure efficient torch handoffs.**