

ROBOCEANA 2016

1. Introduction

This Year Roboceana is back with its new problem statement involving skills of robotics and a sport.

2. Arena Description

- The arena is 3m x 3m square pool of water.
- Height of water in the arena is 35 cm.
- There will be two identical mazes as shown in diagram at opposite ends of the pool with obstacles along the maze path.
- There will be two hoops in the midline of the pool of radius 5 cm and 3.5cm respectively.
- 20 light weight plastic balls of 67 dimension will be scattered in the arena.

3. Robot Requirements

- Mechanism to collect the ball.
- Mechanism to shoot the ball.
- Dimensions of Robot ; 30 cm X 40 cm.

4. Mission:

- Score more points than your opponent in the game to beat him and advance into the next level.
- Each team must navigate the maze to reach the finish position. The teams will be awarded points on basis of time taken to reach the finish position.
- Each team has to pick up and shoot the balls one by one which will be scattered through the maze.
- They have to then shoot the balls through the hoops or at the opponent teams target board to score maximum points.
- Points will be awarded on basis of successful shoots through the hoops

or hits on the opponent's bot. No points will be awarded for unsuccessful shoots. Points will be deducted for successful hit by opponent shoots.

- If required teams can take a reset with a point penalty of 25 points. Once a reset is taken the teams are expected to be ready within the next one minute failing which they will be disqualified. Only one reset is allowed per one team.
- The maximum allowable time for a team is 5 minutes.

5. Scoring criterion:

Shoot	Points
Hoop radius 5 cm and 3.5cm	15 and 10
Opponent's bot	30 / -10
Reaching finish position in 1 minute	40
Reaching finish position under 2minutes	30
Reaching finish position under 3minutes	15
Reaching finish position under 4 minutes	10
Reaching finish position under 5 minutes	5

6. Violations:

- Capsizing of Robot will attract point penalty.
- The bot is not allowed to shoot from a distance less than 35cm from the hoop.
- The bot cannot cross the midline of the pool.

7. Rules and Regulations

- Only one member is allowed to control the robot. A total of two members per team can be allowed near the arena.
- A robot cannot split into two or more subparts. Subpart implies a robot which has a drive mechanism of its own.
- The operator is allowed to touch the robot only during a retry and before the match starts
- The wire of the controller should always be slack .Controlling the robot by pulling the wire will lead to disqualification.
- Damage to the arena is unacceptable and will lead to instant disqualification.
- Coordinators have all rights to ask the teams to produce the additional explanations on design issues. Also the referees can ask for additional explanation on the safety of the bots if required anytime during the event.
- The decision of the coordinators is final and binding.

8.FAQ:

- *What will be the size of the team?*
Ans: The maximum size of the team is restricted to 6 members
- *Do all the team mates need to be from the same college?*
Ans: NO, the team members can be from different colleges
- *Is there any deadline for registration submissions?*
Ans: Registration ends on Links are provided in the webpage. We cannot guarantee on the spot registrations. On spot registrations will be open only for limited number of teams.
- *I am a student from a different stream and have no prior robotics experience. Can I participate?*
Ans: Yes, you can

Contact Us:

For any further clarifications please feel free to contact us.

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