AQUA-ROBOTICS

Task

Design a Robot which is manually controlled and its objective is to move the balls placed in water to the finish line.

Arena

The arena is of rectangular shape of the size 250cm X 200 cm. The track along with obstacles would be revealed to the participants during the event. Depth of water will be around 20cm.

Game Procedure

There will be three rounds:

a) **First round** is the qualification round where the teams have to simply reach the finish line.

b) In the **second round**, the teams have to take the ball placed at start, reach the finish line and again reach the start. The teams to carry 5 balls in the minimum time would advance to the third round. A maximum of one ball can be carried in each trip and maximum of 15 min will be given to each team.

c)**Third round** would be the final round, this would be similar to that of the second round but the bot should be careful not to touch the obstacles and teams failing to do so would score negative points.

Game Rules

1) A ball approximately of the size of tennis ball will be used for the game.
2) At any point of time no two points on the robot can subtend an angle of more than 120 degrees on the center of the ball (robot cannot enclose more than 1/3rd of the ball.)The robot cannot lift the ball from the water surface, it can only push the ball.
3) Any team not ready at the specified time will be disqualified.
4) The machines will be checked for safety before run and will be discarded if found unsafe.
5) If the bot is wireless then remotes will confiscated and will be returned during the match.
6) The bot will be disqualified if found damaging the arena.

General Rules

1) Organizers' decision shall be treated as final and binding on all. The organizers reserve the right to change any or all of the above rules as they deem fit.
2) Change in rules, if any, will be highlighted on the website and notified to the registered participants.
3) Organizers reserve the right to disqualify any team indulging in misbehavior or violating any rules. In case of any disputes/discrepancies, the organizer's decision will be final and binding.
4) Note that at any point of time, the latest information will be that which is on the website. The information provided in the pdf downloaded earlier may not be the latest. However, registered participants will be informed through mail about any such change.

Machine Specification

1) The machine should fit in a box of 25cmx25cmx25cm (lxbxh) at any instant of time.
2) Each team can have only one machine. The machine should not be built by readymade Lego kits or any other readymade assemblies. Readymade chassis are also not allowed. Any machine found damaging the arena or any other machine will be disqualified.

Power Supply

1) The power supply has to be on the machine. The maximum potential difference should not exceed 24V DC between any two points on the machine.
2) Only electrical energy can be used for propulsion. No form of chemical energy is allowed.

Eligibility

All students with a valid identity card from their respective educational institutions are eligible to participate.

Team Specifications

A team can consist of maximum 3 members. Students from different educational institutes can form a team.

Certificate Policy

- Certificate of Excellence will be awarded to the top 3 teams.
- Certificate of Participation will be given to all participating teams.
- Disqualified teams will not be considered for any certificates.

Contact

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