



# ABHYUDAYA

Chasing the Singularity of Excellence

रुद्र  
बॉक्स

# Robo-Soccer

## Description :

- Participants are challenged to design and build robotic soccer players capable of playing the enchanting game of Quidditch without the flying aspect. The challenge lies in blending soccer's strategy and teamwork with the mystical elements of Quidditch.
- Two teams will be competing against each other.
- The total duration of the game is 10 minutes which is divided into two halves.
- Each half is of 5 minutes of duration with a 2.5 minutes of break in between.
- The game clock will run for the duration of the halves without stopping (except if or when a referee wants to consult an official).
- Teams can be penalized one goal per minute at the referee's discretion if they are late for the game start.
- If a team does not report within 5 minutes of the game start, it forfeits the game and the winning team is awarded a 5 - 0 win.



## Robo-Soccer Bot Specification :

- The participating bots should be wireless and controlled remotely.
- It can be Circular/Rectangular in style.
- The bot must fit inside a 30-centimeters wide and 40-centimetres high cube at any point in time.
- Maximum weight should not be more than 5 kgs (including battery for wirelessly controlled bots). However, a tolerance of 5% is acceptable.
- Additionally, the top of the robot must adhere to the standard pattern size and surface constraints. Dribbling devices that actively exert spin on the ball, which keep the ball in contact with the robot are permitted under certain conditions. Participants need to ensure.
- Each team should have two robots for the full tournament.
- The robot must not emit infrared light. However, optical sensors (e.g. infrared-distance-sensors) may be used if they do not affect other robots.
- Batteries must be sealed, immobilized electrolyte type (gel cell, lithium, NiCad, or dry cells).  
The electric voltage anywhere in the machine can be used up to 12V DC at any point in time for each robot.



## Robo-Soccer Arena :

- The total arena-size would be 16x12 Feet and the playing area would be 15x11 Feet. The exact field dimensions and the field markings at the venue may vary by up to ±10% in each linear dimension.
- The floor consists of green carpet on top of a hard-level surface. All straight lines on the field will be painted white and have a thickness of 50 mm.
- The field has two goals, centered on each of the shorter sides of the playing field. The goal inner space is 60cm in width, 60 cm high, and 60 cm deep, box-shaped. It has a cross-bar on top (to prevent robots from entering the goal and to allow checking if the ball scored). The goalposts are positioned over the white line marking the limits of the field.
- A center circle will be drawn on the field. It is 30 cm in diameter. It is a thin white marked circle. It is there for Referees and Captains as guidance during the kick-off.
- In front of each goal, there is a 60 cm wide and 30cm long penalty area. The penalty area is marked with white lines of 25 mm in width. The line is part of the area. A robot is considered inside the Penalty Area when it is completely inside.
- ***There may be some change (5%) in the above terms and conditions.***



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No fear. No limits. Just tech domination. Good luck!!

