



# ROBO SOCCER

## Problem Statement:

Power and control are just as important as quickness and speed!

Design and build a remote-controlled robot, and the players must operate their robots in order to score a goal against the opponent. The ball will be positioned in the arena's centre.

## Robot Specifications:

- The Robot should fit inside a box 30cm x 30cm x 20cm in its full size (all retractable projections included). The measurements must be taken soon before the start of the game, and the constraints must be followed throughout the game.
- The robot's weight should not exceed 5kg.
- Only the robot can drag the ball. Capturing the ball by any method (for example, through a slot in the body or a cup) may result in disqualification.
- The ball cannot pass beneath the robot. Guiding slots (projections/depressions on the robot's surface) should not be larger than the radius of the ball. To strike the ball, the robots can use a mechanism. While making the shot, the striking mechanism may exceed the dimensions constraints.
- Only electrically powered actuators are permitted.
- The power supply might be either internal or external. A maximum voltage of 12 volts direct current
- Team formation is not allowed.



### **Gameplay:**

- As this is an aggressive game, the robots are permitted to hit one other.
- The robots will have no field limitations. It has the ability to go anywhere inside the field.
- The champions will be determined by scoring the most goals in the allotted period.
- A standard golf ball will be used for the game (with an approximate diameter of 45mm and weight 45gm).
- If the ball goes out of the arena, the game will be re-started by keeping the ball in center of the arena.
- The competition is divided into league and knockout rounds. The judges will choose the timing of these rounds.
- If there is a tie at the end of the game, additional time will be allowed to determine the tie.
- Participants who scores more in specified time will make it to the next round.
- Throughout the tournament, play duration will be adjusted based on the matches (league/knock out).
- The decision of the judges is final when it comes to filtering the competitors and selecting the participants for the next stage.
- During the course of the event, no claims will be entertained. In any case, the judge's decision is final.



**Arena Specifications:**

The diagram below represents a sample arena.

