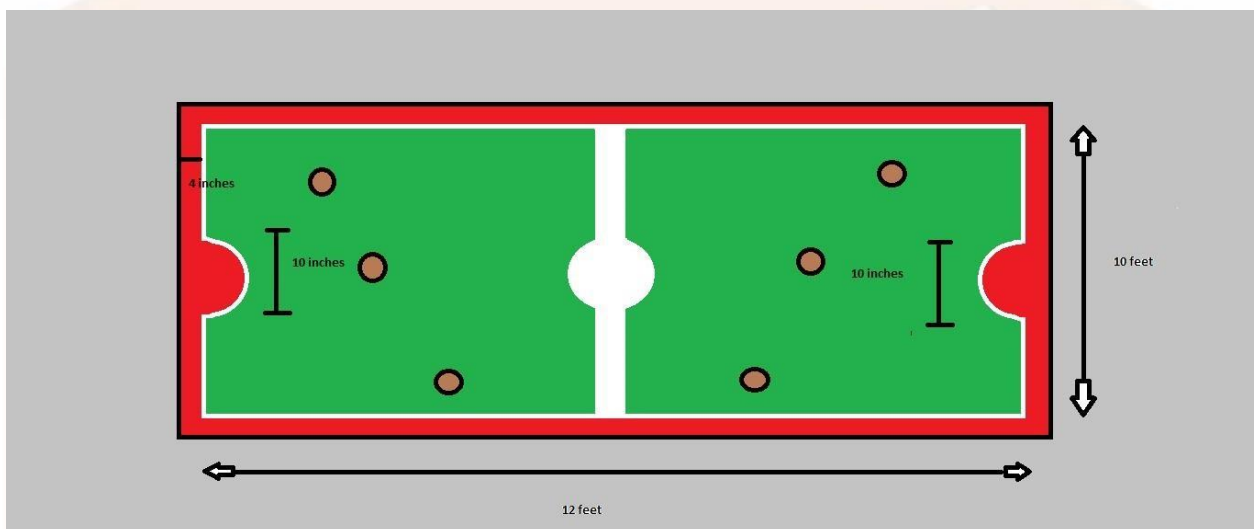


# ROBO CUP

A revolution is about to happen in the sports industry. Robots made by people are ready to prove their worth in the people's sport – FOOTBALL. But these machines are only as good as the person controlling them. Design a manual robot that can be an all-rounder in the football field. A bot that can score goals as well as defend his own goal line will emerge as the new champion.

## ARENA



- Dimensions of arena are 12 feet X 10 feet. (L X B)
- The length of goalpost is 10 inches.
- There are six obstacles in arena 3 on each side.

## GAMEPLAY

- 1) The robots will go one on one in this football tournament.
- 2) Each match would have 2 halves of 4 minutes each.
- 3) After 1<sup>st</sup> round all the teams are ordered according to their points scored and top 50% will proceed to next rounds.



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### ROUND 1: -

- 4) The bots from both the teams must attack by making goals and at the same time defend their own goalpost.
- 5) The bot can kick or drag the ball to score goals.
- 6) A yellow sponge ball of diameter 2.5 inches (approx.) will be used.
- 7) In case the game ends up in a dead lock where the bots or the ball are stationary in the arena for more than 15 seconds the timer will be paused and the game will resume with both bots at their respective D- areas and the ball at the center.
- 8) Fixtures will be decided on the spot with a lucky draw using chits.
- 9) Each level would have its own scoring i.e. no consideration of scores of the previous levels.
- 10) Some obstacles are introduced in the arena which act as players.

### NOTE: -

- The number of subsequent rounds will depend on number of total participations.
- Subsequent rounds are knockout rounds. Winners will proceed to next round.

## SCORING AND PENALTIES

- 1) 40 points for every goal
- 2) -15 for entangling of wires.
- 3) -20 for arena damage.
- 4) -25 for damaging obstacles.
- 5) -10 for two members controlling bot.
- 6) -30 for grabbing ball.
- 7) If wire is not slack:
  - a). For first time → Warning
  - b). For second time onwards → -5
- 8) In case of tie:
  - i. The team with less penalties wins.
  - ii. Two balls will be placed at respective corners of arena and the team which shoots the goal first will be the winner.



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## ROBOT SPECIFICATIONS

- 1) The bot should fit in a box of dimensions 250mm X 250mm X 300mm. (L X B X H)
- 2) The potential difference between any two points on the bot should not be more than 24V.
- 3) The bots may have onboard or off board battery. No direct connection for adapter will be allowed.
- 4) The bot can be wired or wireless. The wireless bot can be connected to controllers (example cellphones).
- 5) For wired bots, length of wire should not be more than 5 meters.
- 6) The bot cannot be constructed using readymade Lego kits or any readymade mechanism. But you can make use of readymade gear assemblies and readymade wireless modules if required.
- 7) The robots shall be inspected before the event. Failing the inspection shall lead to disqualification.
- 8) Pneumatic/Hydraulic/Cutter/Projectile/Entanglement etc. mechanisms are NOT allowed.
- 9) Damaging the arena in any way will lead to disqualification.
- 10) The bot attachment should not contain any kicking mechanism like spring.
- 11) The attachment should fit in cuboid of 150mm X 150mm X 100mm. (L X B X H)
- 12) The bot should not weigh more than 4Kg including batteries (whether onboard or off board).
- 13) No bricks will be allowed on the bot.
- 14) The attachment should be welded, riveted, fastened or perfectly glued. No loose attachment is allowed.

## GENERAL RULES

- 1) Each team can have a maximum of 4 participants.
- 2) A team may consist of students from different colleges with valid identity cards (college ID).
- 3) One person cannot be part of two teams.
- 4) Only one person from the team can control the bot at one point of time.
- 5) The event may be recorded by an overhead camera provided by the organizers.
- 6) No damage should be made by a bot to the arena, to obstacles in arena or to other team's bots during the match in any manner.
- 7) The organizers reserve the right to change the rules as they deem fit.
- 8) When a team is called for match, they must report within five minutes.



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9) Judge's decision will be final.

10) If bot stops working then there will be timer of 15 seconds for the other team to score goal.

Then after 15 seconds, 30 seconds will be provided to the team to rectify the problem. If team is not able to rectify problem within 30 seconds then they have to place their bot as it is whether working or not.

**Note: - Students participating must have their valid college ID. In case they don't have their college ID then they would be disqualified.**

**There can be minor changes in arena at the time of actual gameplay.**


## CONTACT




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