

# ROBO-RUMBLE

“FIGHT FOR HONOUR”

## Problem Statement

Build a robot whose task is to push the opposing robot out of a hexagonal arena. It can push, flip, drag or move your opponent out of the arena in given time without any weapons.

Different robots will compete one-on-one against each other in a knockout tournament, and in the subsequent rounds by a rumble. One who has the strength and the mind to outplay the others will emerge victorious.

And the game goes on with just a temporary successor, until you get to be king of the ring.

## Robot Specification:

- Length: 30cm
- Breadth: 30cm
- Height: 30cm
- Weight:  $\leq 2\text{kg}$
- Potential difference between any two points on the bot should not exceed 24 volts.

## Control specifications:

The robot can be autonomous, wireless (either Bluetooth control or RF controlled) or wired (max. cable length 5m).

## Scenario:

The arena for the event will be hexagonal shape with equal edge length and a width of 5 feet. The arena will at a height of 10 cm. The base of the arena will be white in color bounded by black strip of width 5cm.

## Rules:

- No weapons like blades, sharp edges, hammers etc. are not allowed.
- A game consists of 3 rounds each of 1.5 min.
- You are required to knock the opponent out to win a round.
- If the three rounds result in a tie, the winner will be decided on the basis of points awarded in the third round as per:

SR.NO.	MOVE	POINTS
1.	Side collision	1
2.	Flipped the opponent	2



- A time out of 1 minute will be given in between each of the 3 rounds. Any team, which is unable to fight again after 1 minute, will be eliminated.
- If the robot crosses the boundary itself then it will be declared loser and the opponent will be declared the winner for the round.
- If both robots remain stationary for 10 seconds while in contact with each other (i.e. locked in battle), both robots may be returned to their starting positions at the judges' discretion. In this event, the timer for the bout will not be reset.
- Any discrepancies that may arise are solely solved by the organizers and it remains final.

**Knockout Condition:**

The conditions for a knockout is as follows:

- The first bot to fall out of the arena will be knocked out.
- If the bot is not able to move due to a technical fault, a time period of 5 minutes will be given to rectify the problem, otherwise it will be disqualified.

**Note:**

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