

# Tug of war

- For strongest of the strong

### **INTRODUCTION:**

Imagine the adrenaline rush of fighting in a tug of war. Exciting isn't it? Now think what it would be like if robots played the sport. Tug of war is for the strongest among the strong. You are required to build a bot which needs to pull the opponent so hard that they lose the hope of winning. Think you are up for the challenge? Then start building your tug of war robot now.

### **PROBLEM STATEMENT:**

Build a manually controlled robot skilled enough to pull the opponent robot across their line within the least possible time.

### **QUALIFYING ROUND:**

1. There will be a line in the center of the arena (central line).
2. There will be 2 more lines on either side of the central line, equidistant from it. These are the start lines for the two competing robots.
3. A coordinator will tie a rope from one robot to the other.
4. Once the game starts, each bot will try to pull the rope as hard as possible, to pull the opponent robot.
5. If a robot pulls its opponent beyond the central line, it gets a point.
6. Three such rounds (bouts) will be conducted. The robot that wins more rounds will be the winner.
7. Maximum duration of each round will be 2 minutes.
8. In case of a tie, a tie breaker round shall be conducted. If it is still a tie, then the robot farer from the central line wins.

# ROBOVANZA

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## **ROBOT SPECIFICATIONS:**

1. The maximum dimensions of the robot are 30cm x 30cm x 30cm (l\*b\*h).
2. Robots can be wired, wireless or autonomous.
3. If wired, the wires shall be slacked always. The participants are suggested to have minimum wire length of 2 m.
4. Power supply to the robots should not exceed 12V.
5. Power supply can be ON/OFF BOARD.
6. Maximum weight of robot with battery shall not exceed 6 kgs.
7. Tolerance of 5% on dimensions and power supply will be accepted.

## **RULES AND REGULATIONS:**

1. A team can consist of a maximum of **4 members**.
2. Members of different institutions can form a team and must carry your respective college ID cards.
3. Only **2 members** of a team can stay around the arena (for controlling and assistance).
4. Any kind of damage to the arena will not be entertained, and if done, the robot will be immediately disqualified.
5. No technical assistance will be provided by the coordinators during the time of the event.
6. No practice runs will be provided.
7. Use of an IC engine in any form is not allowed.
8. Human interference (e.g. touching the robot, stepping into the arena) during the game is not allowed.
9. No external power supply will be provided at the time of event.
10. A robot with the base of a toy car and its gearbox as a machine part will be disqualified. Also, LEGO kits are strictly prohibited.
11. Member participated from a team cannot participate in another team for the same event.

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12. A robot can participate only once in that particular event.
13. The organizers are not responsible for any kind of damage to your robot.
14. In case of any discrepancies, the decision of the coordinator and the event head shall be final, and no further arguments shall be entertained.
15. The teams should bring their own toolkits.

### **CERTIFICATE POLICY:**

1. A certificate of participation will be awarded to all participating teams except for the disqualified team.
2. A certificate of merit would be awarded to the winners, along with prize:
  - \*1<sup>st</sup> Prize : Rs 2000**
  - \*2<sup>nd</sup> Prize : Rs 1000**

### **CONTACT:**

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