



Sreenidhi's Annual Technical Fest ★ ISO 20121:2012 CERTIFIED

ROBOVEDA '23

explore the unwritten lore...



JALADHIMATRA

RESEARCH
FORUM

JALADHMATRA

1. GAMES AND RULES:

Design a Wired or Wireless manually controlled Robot capable of navigating by floating on water and completing specific tasks within the provided time. The robot will be positioned ahead of the starting line. The end zone of the arena will be revealed on the day of the event. Water and completing specific tasks within the provided time. The robot should be designed such that it is capable of traversing through water with utmost ease and technique. The robot should be able to cross the hurdles that it comes across in the arena and make it to the finish line. The arena and all the rounds are prepared to evaluate all the attributes of the robot and to make the best robot win.

2. ARENA:

2.1 The arena is as shown in the figure below. Water will be filled to a certain height.

2.2 The arena consists of certain obstacles and checkpoints. The robot should be able to traverse through the obstacles with utmost stability.

3. THE COMPETITIONS AND MATCHES:

There will be two rounds.

I. Qualifying Round

II. Final Round

3.1 QUALIFYING ROUND

3.1.1 Each robot has to traverse the path by floating on the water in minimal time.

3.1.2 The robots that traverse the path in the least time are shortlisted and forwarded to the final round.

3.1.3 The arena just resembles the figure below. The figure is not up to scale.

3.1.4 Obstacles and their positions may vary in the arena.

3.1.5 There may be minimal changes in the arena

3.1.6 The robot will be placed before the start line.

3.1.7 The robot has to traverse through the square zone which contains some obstacles.

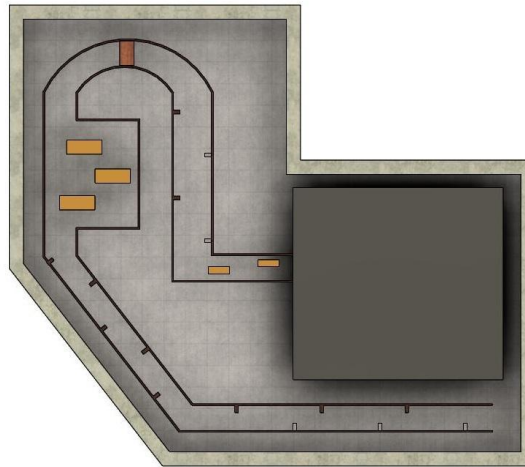
3.1.8 Then the bot has to pass a spherical curve which contains some obstacles.

3.1.9 And then the bot has to pass through a rectangular zone that contains some obstacles.

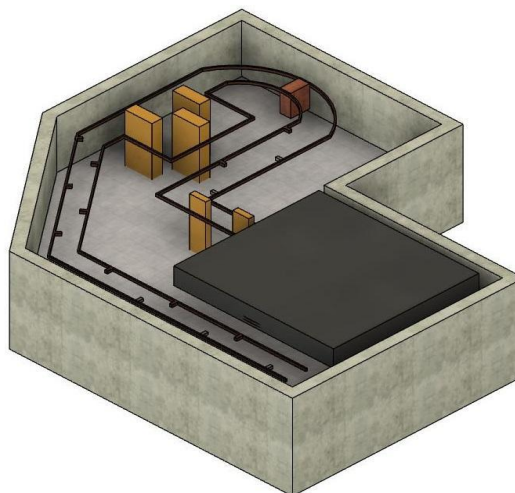


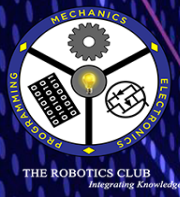
- 3.1.10 After that the bot should reach the end point by passing the end zone of the arena.
- 3.1.11 The end zone of the arena will be revealed on the day of the event.
- 3.1.12 And then the bot has to pass through a rectangular zone that contains some obstacles.
- 3.1.13 After that the bot should reach the end point by passing the end zone of the arena.
- 3.1.14 The end zone of the arena will be revealed on the day of the event.

ARENA (TOP VIEW)



ARENA





3.2 FINAL ROUND

3.2.1 Details about the Final Round will be revealed on that same day itself as and when the round is conducted.

3.2.2 Specifications of the bot for the final round are the same as that of the qualifying round.

3.3 POINTS & PENALTIES:

3.3.1 Based on the violations and penalties the overall time is calculated.

3.3.2 The maximum time for each participant is 15 minutes for track completion.

3.3.3 The penalty is imposed, if the robot touches the boundary.

3.3.4 If the robot flips or is stuck in the arena, the coordinator will arrange the bot properly at the nearest checkpoint and the penalty will be imposed.

3.3.5 The technical timeout will be given for the participant at the request of the participants for one minute if there is no further movement in the robot.

3.3.6 A penalty will be imposed if the robot touches the obstacles.

3.3.7 If the robot moves out of the arena then the bot will be placed at the nearest checkpoint and a penalty will be imposed.

3.4 DISQUALIFICATION:

3.4.1 If a participant does not comply with the rules of the event, the robot will be disqualified from the event.

3.4.2 The robot should not damage the arena. The constantly damaging the arena may lead to disqualification.

3.4.3 Misbehavior of any kind will not be tolerated and the team will be subjected to disqualification from RoboVeda'23.

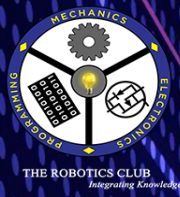
3.4.4 Ready-made chassis, any form of printed circuit boards or controller boards (other than Arduino and motor drivers) are not allowed. Failing to oblige, shall lead to disqualification.

3.4.5 Human interference (e.g. touching the robot) during the game will not be allowed.

3.4.6 If the Robot is unable to complete the track traversal within time (15 minutes) is considered disqualified.

3.4.7 If the robot moves out of the arena twice, then the bot will be out of the event or play.





4. ROBOT SPECIFICATIONS:

- 4.1 The maximum dimensions of the bot should be 30x30x40cm(1*b*h).
- 4.2 The robot may be wired or wireless.
- 4.3 The robot should be self-powered with a supply not exceeding 12V.
- 4.4 Power supply can be on board or off board. Participants cannot draw power from outside.
- 4.5 There is no weight limit for the robot.
- 4.6 A tolerance of 5% is allowed in the dimensions and power supply.
- 4.7 LEGO kits are not allowed.
- 4.8 In the case of wired robots, it is advisable to get wires of larger length as per your requirement and arena specifications and strictly not less than 3 meters.
- 4.9 Potentiometers are not allowed to be used.
- 4.10 The robot should not expand or compress during the run.

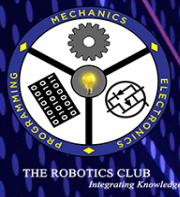
5. JUDGING CRITERIA:

- 5.1 Any team will be eligible for the next round only if the robot completes the qualification round within the given stipulated time.
- 5.2 However, teams are selected only if they succeed in making it to the shortlist.
- 5.3 A penalty will be imposed if the robot touches any boundary.
- 5.4 The team completing in less amount of time will have first preference.
- 5.5 A "Time waiver" of 5 seconds will be provided from total time to RF-controlled robots.
- 5.6 The selected number of teams will be forwarded to the next round.

6. RULES AND REGULATIONS:

- 6.1 A team can consist of a maximum of 4 members.
- 6.2 Members from different institutions can form a team.
- 6.3 Only 2 members of a team are allowed to stay around the arena (for controlling and assisting) and a team is allowed to play with one robot only.
- 6.4 Arena may contain various hurdles (it can be of any kind).
- 6.5 Any kind of damage to the arena will not be entertained, and if done, the robot will be immediately disqualified.
- 6.6 All the required accessories have to be brought by the participants.
- 6.7 No technical assistance will be provided by the coordinators during the time of the event.
- 6.8 No practice runs will be provided.
- 6.9 Use of an IC engine in any form is NOT allowed.



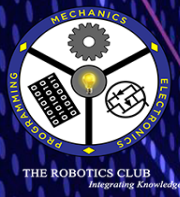


- 6.10 Human interference (e.g. touching the robot) during the game is not allowed.
- 6.11 If a participant does not comply with the rules of the event he/she will be disqualified from the event.
- 6.12 The robot should not harm the opponent or the field. Constantly harming the arena may lead to disqualification.
- 6.13 Decisions of the Event Coordinators shall be treated as final.
- 6.14 No external AC/DC power supply will be provided at the sight of the play.
- 6.15 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 and will lead to disqualification.
- 6.16 Participants with wired robots are strictly advised to get wires of length 3m or more.
- 6.17 In the case of wired robots, the wired should be slacked throughout the game.
- 6.18 Other rounds will be disclosed later during the event.
- 6.19 Only undergraduates are allowed to participate.

7. OTHERS:

- 7.1 All participants will be given a Certificate of Participation.
- 7.2 Winners and runners will be given a Certificate of Merit.
- 7.3 Members from a team cannot participate in another team for the same event.
- 7.4 In case of any discrepancies, the decision of the coordinator and the event head shall be the final and no further arguments shall be entertained.
- 7.5 A robot is allowed to participate only once in that particular event.
- 7.6 We request the participants not to assume anything without contacting us.
- 7.7 Team RoboVeda is not responsible for any kind of damage to your robot.
- 7.8 All the participants are requested to bring their college ID cards.
- 7.9 Events Ranaveera, Pushpak and Yantraa are open categories. All the remaining events are open for students pursuing up to B.tech level only.
- 7.10 The registration fee per individual in a team is ₹299 with which the entrant can participate in Yoddha, Samanvayi and Jaladhmatra.
- 7.11 The registration fee per individual in a team is ₹549 with which the entrant can participate in all the events except Pushpak, Ranaveera, and Yantraa.
- 7.12 The registration fee is ₹799 for which the entrant can participate in all the events including Ranaveera(any one category only), Pushpak, and Yantraa.
- 7.13 The registration fee is ₹849 for which the entrant can participate in all the events including Ranaveera(both categories), Pushpak, and Yantraa.
- 7.14 One should pay the scheduled amount before participating in the event.
- 7.15 If you choose our hospitality, the payment must be done on the day you check-in.





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Note: In case of any discrepancies, the decision of the coordinator and the event head shall be the final and no further arguments shall be entertained.

THANK YOU

EVENT COORDINATORS:

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